UNIVERSITY OF KWAZULU-NATAL

DECISION MAKING AND INDECISIVENESS: THE IMPACT ON BUSINESS IN DURBAN

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College of Law and Management Studies

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Signed	••••	 	 	
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Abstract

The only constant in the world is change. Organisations are constantly bombarded by change that needs to be addressed by timely and effective decision making. Changing a culture of indecision in an organisation is an enormous task, which in some instances may take many years to accomplish. Decision making is an important area of research and understanding the process by which individuals make decisions is important to understanding the decisions that they make. The decisions that individuals take affects the ultimate success or failure of an organisation. The aim of this study was to determine the effect of decision making and indecision on organisations and to critically examine the attitudes and perceptions of decision makers on organisational effectiveness. The sampling technique used for this study was a purposive judgment non-probability sample with a sample size of 117. The majority of the sample (78%) held managerial positions. Judgment sampling may curtail the generalisability of the findings, due to the use of individuals that were conveniently available. A questionnaire was distributed via the Internet thereby excluding individuals without Internet access from this study. Statistical analysis revealed that most organisations had good decision making structures but individuals had difficulty in making decisions instantly and that indecision existed in organisations. It also became apparent that staff had confidence in their decision making and that they conducted research before making decisions. The study revealed that organisations can address indecisiveness through on-going involvement. To take this process forward, organisations need to prepare individuals through training and information sessions. Organisations therefore need to provide tools that ensure complete information is available to employees in order for quick and efficient decision making. This study was designed to help managers and other employees understand the theories and practices of effective decision making so that they can make better decisions in their personal and professional lives. It will benefit organisations and their employees in understanding what they need to do in order to survive in a fast moving and competitive environment.

Table of Contents

Title P	age	. i
Declar	ation	ii
Ackno	wledgements	iii
Abstra	ct	iv
List of	Figures	X
List of	Tables	хi
CHAP	TER ONE	1
Overvi	ew of the Study	. 1
1.1	Introduction	1
1.2	Motivation for the Study	. 1
1.3	Focus of the Study	2
1.4	Problem Statement	2
1.5	Objectives	3
1.6	Research Questions	3
1.7	Limitations of the Study	3
1.8	Chapter Outline	4
1.9	Summary	5
CHAP	TER TWO	6
The Ma	aking of Decisions Reviewed	6
2.1	Introduction	۵

	2.2	Definitions	7
	2.3	Background and Context of Decision Making	8
	2.4	Decision Making Models	9
	2.4	.1 Rational Model	9
	2.4	.2 Simon's Normative Model / Bounded Rationality	11
	2.4	.3 Garbage Can Model	12
	2.4	.4 Incremental Model	13
	2.4	.5 Intuitive Model	13
	2.5	Decision Making Methods	15
	2.5	5.1 Nominal Group Technique / Method	15
	2.5	5.2 Delphi Technique / Method	16
	2.5	Management Science / Computer Aided Decision Making	17
	2.5	5.4 Environmental Scanning Method	18
	2.6	Decision Making Styles	18
	2.7	Groupthink	20
	2.8	Ethical Decision Making	22
	2.9	Indecision	24
	2.10	Summary	25
C	CHAPT	ER THREE	26
F	Resear	ch Methodology	26
	3.1	Introduction	26
	3.2	Aim and Objectives of the Study	26
	3.2	2.1 Aim	26
	3.2	2.2 Objectives	26

3.3	Target Audience	. 27
3.4	Sampling	. 27
3.5	Sample Size	. 29
3.6	Quantitative vs Qualitative Research	. 30
3.7	Data Collection Techniques	. 32
3.8	Questionnaire and Questionnaire Design	. 33
3.9	Questionnaire Pretesting and Validation	. 34
3.9	0.1 Pretesting the Questionnaire	. 34
3.9	0.2 Validation of the Questionnaire	. 35
3.10	Data Analysis Methods	. 37
3.1	0.1 Descriptive Statistics	. 37
3.1	0.2 Inferential Statistics	. 38
3.11	Summary	. 40
CHAPT	ER FOUR	. 41
Results	S	. 41
4.1	Introduction	. 41
4.2	Reliability Evaluation Using Cronbach Alpha	. 41
4.3	Descriptive Statistics of the Independent Variables	. 42
4.3	3.1 Age of the Respondents	. 43
4.3	3.2 Gender of the Respondents	. 43
4.3	8.3 Respondents Position at	. 44
4.3	S.4 Sector in which Respondents Worked	. 45
4.4	Descriptive Statistics of the Dependent Variables - Frequencies	. 45

		4.4.1 and m	Objective One: To determine the effect of organisational structures echanisms on decision making	
		4.4.2 makin	Objective Two: To evaluate staff views and opinions on decision g and indecision	48
		4.4.3 decisio	Objective Three: To evaluate the effect of training and support on making	. 52
		4.4.4 makin	Objective Four: To establish the level of confidence of staff in decisi g 54	ion
		4.4.5 makin	Objective Five: To determine whether staff perform research before g decisions	
	4.	5 Cr	oss-Tabulation	59
	4.6	6 Inf	erential Statistics	61
	4.	7 Su	ımmary	64
C	ΉΑ	PTER	FIVE	65
С)isc	ussio	n	65
	5.	1 Int	roduction	65
	5.2	2 De	emographics	65
	5.3	3 Fir	ndings of the Study	66
		5.3.1 and m	Objective One: To determine the effect of organisational structures echanisms on decision making	66
		5.3.2 makin	Objective Two: To evaluate employee views and opinions on decision and indecision	
		5.3.3 decisio	Objective Three: To evaluate the effect of training and support on making	. 68
		5.3.4 decisio	Objective Four: To establish the level of confidence of employees in making	
		5.3.5	Objective Five: To determine whether employees perform research making decisions	
	5.4	4 Su	ımmarv	70

CHAP	CHAPTER SIX72		
Recon	nme	ndations and Conclusion	72
6.1	Int	roduction	72
6.2	Ke	y Findings	72
6.3	Lir	mitations of the Study	73
6.3	3.1	Limited Timeframe	73
6.3	3.2	Sample Size Limitations	73
6.3	3.3	Abundance of Literature	74
6.3	3.4	Questionnaire Limitations	74
6.3	3.5	Correlation and Causation Limitations	75
6.3	3.6	Comparison of companies	75
6.4	Re	ecommendations for this Study	75
6.5	Re	ecommendations for Future Studies	77
6.6	Сс	onclusion	79
REFE	REN	CES	xii
APPE	KIDI	〈 1	xix
Que	stior	nnaire	xx
APPEI	(IDI	(2	xxv
Fthic	al C	Clearance	XXV

List of Figures

Figure 2.1	Steps in the Rational Decision Making Model	9
Figure 2.2	Decision Making Styles	. 19
Figure 2.3	The Ethical Leader's Decision Tree	. 23
Figure 4.1	Distribution of responses by age group	. 43
Figure 4.2	Distribution of responses by gender	. 43
Figure 4.3	Distribution of responses by position at work	. 44
Figure 4.4	Distribution of responses by sector	. 45
Figure 4.5	Decision making structures	. 46
Figure 4.6	Motivation from the organisation	. 47
Figure 4.7	I take my time	. 48
Figure 4.8	My colleagues take their time	. 49
Figure 4.9	I make a decision instantly	. 50
Figure 4.10	My colleagues make decisions instantly	. 50
Figure 4.11	My organisation tolerates indecision	. 51
Figure 4.12	Fear of voicing opinion personally	. 52
Figure 4.13	Colleagues unafraid to voice opinion	. 52
Figure 4.14	Staff training on decision making	. 53
Figure 4.15	Confidence in outcomes	. 54
Figure 4.16	Confidence in economic sector	. 55
Figure 4.17	I enact the decisions I take	. 55
Figure 4.18	Tolerance of indecision	. 56
Figure 4.19	Impatience with indecision	. 56
Figure 4.20	Non promotion of indecision	. 57
Figure 4.21	Learning from colleagues	. 58
Figure 4.22	I research thoroughly	. 58
Figure 4.23	I don't take the opinion of junior staff	. 59

List of Tables

Table 2.1	Guidelines for Developing Intuitive Awareness14	
Table 2.2	The Eight Symptoms of Groupthink	21
Table 3.1	Major Differences between Qualitative and Quantitative Research.	31
Table 3.2	The strength of correlation coefficients40	
Table 4.1	Instrument reliability using Cronbach alpha	41
Table 4.2	Position at work cross tabulated with whether respondents took the)
	opinions of junior staff when making critical decisions	60
Table 4.3	Correlation between position at work and taking opinions of junior	
	staff	61
Table 4.4	Correlation between taking one's time and making a decision	
	instantly	62
Table 4.5	Correlation between making a decision instantly and pondering over	er
	the right decision	63
Table 4.6	Correlation between confidence in outcomes of decisions and	
	confidence in oneself	63

CHAPTER ONE

Overview of the Study

1.1 Introduction

According to Sekaran (2003), research is the process of finding solutions to a problem after a thorough study and analysis of the situational factors. Sekaran (2003) further suggests that organisations constantly engage themselves in studying and analyzing issues and hence are involved in some form of research activity as they make decisions in the workplace. Satell (2010) made the point that making decisions are probably the most important things that humans do. In a position of responsibility, choices will determine not only one's fate, but the fate of others as well. It is frustrating that almost all important decisions are made under some kind of duress. There is rarely enough time or information. At most times individuals want to go with their intuition, but at the same time they feel the great responsibility of being rational. Useem (2005) stated that it was Napoleon who believed that 'nothing is more difficult and more precious than being able to decide'. Decision making is an organisational process that goes beyond the individual and ultimately affects the goals of the organisation. The motivation, focus, problem statement, objectives, research questions and limitations of this study will be elaborated further in this chapter.

1.2 Motivation for the Study

The success of an enterprise is the sum of the decisions made in the course of doing business (Kopeikina 2006). This success can only be achieved if all employees contribute towards decision making. There are many different types of organisations in the Durban metropolis that range in size from small enterprises to multi-national corporations. These organisations are represented in sectors as diverse as agriculture, manufacturing, logistics, finance, Information and Computer Technology (ICT), and academia. These organisations will benefit from an understanding of decision making and that decisions shape important outcomes

for individuals, families, businesses and societies and if more is known about how to improve those outcomes, individuals, families, businesses and societies would benefit.

1.3 Focus of the Study

The focus of this study established the effect of decision making and indecisiveness and its impact on businesses in Durban. In order to fully understand the extent of indecisiveness in organisations, questionnaires were distributed to individuals in Durban and surrounds.

1.4 Problem Statement

This study aimed to identify the impact that decision making and indecisiveness had on businesses. Most organisations have ambiguous environments which are becoming increasingly multifaceted and unpredictable (Charan 2006). In order to change indecision, great thought and connections between people are necessary. An open dialogue must be created with employees to set the tone for an organisation to create honest and timeous decisions.

Leading social scientists such as Charan (2006) have noted that the people tasked with reaching a decision and acting on it fail to connect and engage with one another. Intimidated by group dynamics of hierarchy and constrained by formality and lack of trust, they speak their lines woodenly and without conviction. Lacking emotional commitment, the people who must carry out the plan don't act decisively. Charan (2006) further stated that studies of successful organisations often focus on their products, business models, or operational strengths such as Microsoft's world conquering Windows operating system; Dell's mass customization; Wal-Mart's logistical prowess. Decisive dialogues and robust operating mechanisms with their links to feedback and follow through are essential for success which may not be easily duplicated. This study will attempt to answer the question: "Are Durban's business decision makers adequately equipped to take decisions?"

1.5 Objectives

In order to answer the research question, this study sets out to achieve the following objectives:

- To determine the effect of organisational structures and mechanisms on decision making.
- To evaluate employee views and opinions on decision making.
- To evaluate the effect of training and support on decision making.
- To establish the level of confidence of individuals in decision making.
- To determine whether decision makers perform research before making decisions.

1.6 Research Questions

Some of the questions that will be answered in this research are:

- What is the effect of organisational structures and mechanisms on decision making?
- What are employee views and opinions on decision making?
- What is the effect of training and support on decision making?
- What is the level of confidence of employees in decision making?
- Do employees perform research before making decisions?

In order to answer these questions, a survey will be conducted among Durban decision makers.

1.7 Limitations of the Study

Some of the limitations of this study were:

• The timeframe for the distribution and for data collection from the questionnaire was limited. The data was collected in a nine month period

and ran concurrently with the progression of the literature review and research methodology. The data collection was limited to the geographic region of Durban.

- A vast amount of information was available. A multitude of books, academic journals and industry specific periodicals devoted solely to the topic was available. Due to the sheer volume of literature, this study limited the literature research to academic journals, periodicals from recognised business schools and books written by experts in management.
- The questionnaire was distributed mainly via the Internet, therefore, persons without access to the Internet would have been excluded from this study.
- The sampling technique used for this study is a purposive judgment nonprobability sample. Judgment sampling may curtail the generalisability of the findings, due to the use of a sample of individuals that were conveniently available.

These limitations will be discussed in greater detail in Chapter Six.

1.8 Chapter Outline

This study will be presented in six chapters. Chapter One provides an overview of the study. The motivation for the study is discussed which is followed by the problem, focus and the aims of the study. The limitations of the study will also be presented in Chapter One and further expanded in Chapter Six.

Chapter Two presents the literature review of this study. It discusses the different decision making models; decision making methods; and decision making styles. This chapter is the most important chapter in setting the background to the study.

Chapter Three explains the aim and objectives of this study. This chapter also details the research methodology which includes sampling; data collection; and

data analysis. Using these procedures and techniques an analysis was done to measure the various aspects of decision making.

Chapter Four presents the results of the empirical data that was collected and analysed. The empirical data was interpreted by using SPSS, a computerised statistical program. SPSS generated descriptive statistical data and inferential statistical data in the form of figures and tables which enabled the data to be classified using graphs, reliability coefficients and correlation coefficients.

Chapter Five presents a discussion of the research findings of this study. It interprets and explains the findings. It also addresses the aims and objectives and explains how the collected data connects with this study.

Chapter Six contains the limitations, recommendations, and conclusion of this study. It discusses whether the problem was solved; the implications of this research; recommendations for this research; and recommendations for future studies. Finally, the conclusion of this chapter brings closure to this study.

1.9 Summary

The motivation and objectives for this study have been outlined in this chapter whilst highlighting the focus, problem statement and limitations of the study. Changing a culture of indecision in an organisation is an enormous task, one that may take many years to accomplish. Dietrich (2010) stated that decision making is an important area of research and understanding the process by which individuals make decisions is important to understanding the decisions they make. Due to the breadth of this topic, there are many research approaches that can be taken to explore decision making; however, this study will contribute to changing the culture of indecision, by identifying several factors that influence decision making. The next chapter provides the details of the literature review.

CHAPTER TWO

The Making of Decisions Reviewed

2.1 Introduction

The only constant in the world is change. Organisations are constantly bombarded by change that needs to be addressed by timely and effective decision making. What is decision making; how does it affect businesses; and how can decision making assist in building successful businesses? At any given point in time, these questions have plagued organisations' which has led to research in this field. Decision making and allied disciplines have been the subject of research for many years. Decision making can be regarded as the mental processes resulting in the selection of a course of action among several alternatives (Drucker 1967; Robbins 2001; Kreitner & Kiniki 2008). Every decision making process produces a final choice. The output can be an action or an opinion of choice (Vogler 2008).

Effective leaders learn to shift their decision-making styles to match changing business environments (Snowden & Boone 2007). Just as the weather changes constantly, so too do decisions. Deciding on what to wear based on the weather forecast is a relatively simple decision. Although low level decisions are taken daily, they are just as important as high level decisions. According to Drucker (2004), most discussions of decision making assume that only senior executives make decisions or that only senior executives' decisions matter. This is a dangerous mistake. Decisions are made at every level of the organisation, beginning with individual professional contributors and frontline supervisors. These apparently low-level decisions are extremely important. In her research, Dietrich (2010) stated that every day people are inundated with big and small decisions. Understanding how people arrive at their choices have received a lot of attention and has been researched to understand the decision making process.

Indecision with its corresponding effects on organisations is subject to much debate. As Charan (2006) puts it, breaking a culture of indecision requires a leader who can engender intellectual honesty and trust in the connections between people. Charan (2006) stated that some people cannot make up their mind and the same applies to organisations and that is the reason why the organisation's performance suffers.

This chapter will examine the literature surrounding decisions, different models, methods, styles, related strategies and some of the causes of indecision.

2.2 Definitions

Decision Making Definitions

Mintzberg (1983 cited in Teale, Dispenza, Flynn & Currie, 2003: 6) simply defines decision making as 'a commitment of action'. The father of modern management, Drucker (1967 cited in Edersheim, 2007: 209) expands on the definition by stating that: 'A decision is a judgment. It is a choice between alternatives. It is rarely a choice between right or wrong. It is often a choice between two courses of action, neither of which is probably more nearly right than the other'.

Kreitner & Kiniki (2008: 336) also provide a concise definition by stating that 'decision making entails identifying and choosing alternative solutions that lead to a desired state of affairs'. Harrison (1999 cited in Teale, Dispenza, Flynn & Currie, 2003: 6) further states that decision making is: 'A moment, in an ongoing process of evaluating alternatives for meeting an objective, at which expectations about a particular course of action impel the decision-maker to select that course of action almost likely to result in attaining the objective'. Robbins (2001: 131) provides a succinct interpretation by defining decisions as 'the choices made from two or more alternatives'.

The common theme among these definitions, explicit and implicit, is that decision making involves making a choice that produces a result. It therefore follows that by not choosing, indecision occurs.

2.3 Background and Context of Decision Making

The economic crisis of 2008 has created an even greater emphasis for organisations to make speedier and more effective decisions. This is exacerbated by the fact that errors are costly and will get even costlier (Milkman, Chugh & Bazerman 2009). Decisions shape important outcomes for individuals, families, businesses and societies and if more is known about how to improve those outcomes, individuals, families, businesses and societies would benefit (Milkman, Chugh & Bazerman 2009).

Individuals are less receptive to change initiated by others rather than to change initiated by themselves. Individuals are more supportive of changes when they are involved in the decision making process, thus they find it easier to commit to the processes involved. Recent research by Francis (2011) stated that decision making without a group's input is an individual decision. Helms & Cengage (2006) noted that group decision making is a process in which multiple individuals acting collectively, analyze problems or situations, consider and evaluate alternative courses of action, and select from among the alternatives a solution or solutions.

The seminal theorist, Kurt Lewin (1951 cited in Misselhorn 2001: 301) deepened the understanding of groups, experiential learning, and action research. Lewin argued that group behaviour is an intricate set of symbolic interactions that not only affect group structures, but also modify individual behaviour. Individual behaviour is a function of the group environment, therefore decision making and indecisiveness must be viewed within the context of this environment. Helms & Cengage (2006) stated that group decision-making takes advantage of the diverse strengths and expertise of its staff by helping them generate a greater number of alternatives that are of higher quality than the individual. However, it is entirely up to the organisation to successfully implement the correct method, either through individual or group decision making.

Individual decision making and group decision making may be seen as two separate and independent processes, however, individual and group decision making is inextricably linked and oftentimes seems to be almost interchangeable.

The different models, methods, styles, related strategies and some of the causes of indecision are discussed in the following sections.

2.4 Decision Making Models

There are several decision making models that have been developed over time. The rational model is perhaps the oldest of all the models. Other models that have addressed the limitations of the rational model are collectively known as nonrational models. These include Simon's normative model, also known as the bounded rationality model; the garbage can model; and the incremental model. These models will be discussed in detail.

2.4.1 Rational Model

The rational decision making model describes how individuals should behave in order to maximize some outcome. Robbins (2001) suggests that there should be six steps in a rational decision making model as listed in Figure 2.1.

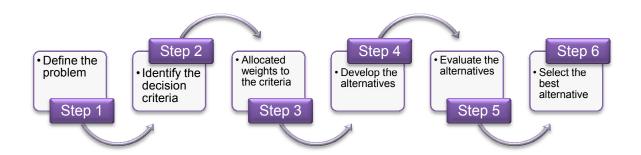


Figure 2.1 Steps in the Rational Decision Making Model

Adapted from Robbins, S.P. 2001. Organizational Behavior, 9th ed. Prentice Hall, New Jersey. p132.

According to Robbins (2001), in order to optimize a certain outcome, the six steps in the model start by defining the problem. Although the problem may seem obvious to many, it helps to clearly define the problem as many poor decisions can be traced to the decision maker overlooking a problem or defining the wrong problem. In the second step, the decision maker determines what is relevant in making the decision. The third step requires the decision maker to weight the

previously identified criteria in order to give them the correct priority in the decision. The fourth, fifth and six steps are self explanatory and should be followed with diligence and care.

A more concise four step rational model is recommended by Kreitner & Kiniki (2008) whereby the decision maker should: identify the problem; generate alternate solutions; select a solution; and implement and evaluate the solution. However, Vogler (2008) condenses this even further into three steps stating that there are three components to rational decision making: what the agent wants (the goals, desirabilities, preferences or ends); the prospective actions or policies under consideration (the practicable options or means); and what the agent expects will happen as a result of taking specific action or adopting specific policy measures.

Robbins (2001) further mentions that there are a number of underlying assumptions to the six step model. It is assumed that the problem is clear and unambiguous; the decision maker is aware of all the possible consequences of each alternative; the criteria and alternatives can be ranked and weighted; the criteria and weights are constant and stable over time; there are no time or cost constraints; and the rational decision maker will choose the alternative that yields the highest perceived value.

Taking these assumptions one step further, Knighton (2004) argues that there are consistent violations of the rational model. While agreeing that the rational choice model requires decision-makers to choose the option with the highest expected value, it is argued that this does not necessarily represent the most likely outcome or the outcome that might deliver the highest return. Knighton (2004) further notes that in addition to behaviour observed in experiments, real life also provides further evidence of the ways in which people do not conform to the principles of rational theory. Simon (1979) was more assertive in noting that the assumptions of perfect rationality are contrary to fact and further notes that it is not a question of approximation, perfect rationality does not even remotely describe the processes that human beings use for making decisions in complex situations. Although there

is much criticism of the rational model, it is still widely used due to the many benefits gained in trying to follow the model.

2.4.2 Simon's Normative Model / Bounded Rationality

Herbert Simon, a decision theorist who earned the Nobel Prize in 1978 for his work on decision making proposed this model to describe the process that is actually used when making decisions. Bounded rationality as Simon (1979) asserts, is the need to search for decision alternatives; the replacement of optimization by targets and satisficing goals; and the ability of human beings to adapt optimally, or even satisfactorily, to complex environments. Simon (1991) noted that satisficing consists of choosing an alternative that is "good enough", an alternative that meets a minimum level of performance. Satisficing resolves problems by finding a solution that is satisfactory as opposed to a solution that is the optimum one.

Bounded rationality represents the notion that decision makers are "bounded" or restricted by a variety of constraints when making decisions (Kreitner & Kiniki 2008). These constraints include any personal or environmental characteristics that reduce rational decision making. Robbins (2001) notes that since the capacity of the human mind for formulating and solving complex problems is far too small to meet the requirements for full rationality, individuals operate within the confines of bounded rationality. The term 'bounded rationality" is used interchangeably with 'bounded awareness' by Bazerman & Chugh (2006) who assert that the phenomenon of bounded awareness occurs when cognitive blinders prevent a person from seeing, seeking, using, or sharing highly relevant, easily accessible, and readily perceivable information during the decision-making process.

Bounded awareness can occur at various points in the decision-making process. First, executives may fail to see or seek out key information needed to make a sound decision. Second, they may fail to use the information that they do see because they aren't aware of its relevance. Finally, executives may fail to share information with others, thereby bounding the organisation's awareness (Bazerman & Chugh 2006).

2.4.3 Garbage Can Model

The garbage can model was developed in response to the rational model's inability to explain how decisions are actually made. Rahman & De Feis (2009) state that the garbage can model of decision making builds on the risky and complex interaction of problems, solutions, participants and choice opportunities. Kreitner & Kiniki (2008) state that according to the garbage can model, decisions result form a complex interaction between four independent streams of events: problems, solutions, participants, and choice opportunities.

Although organisations can often be viewed conveniently as vehicles for solving well-defined problems or structures within which conflict is resolved through bargaining, they also provide sets of procedures through which participants arrive at an interpretation of what they are doing and what they have done while in the process of doing it. Cohen, March & Olsen (1972) further note that an organisation is a collection of choices looking for problems, issues and feelings looking for decision situations in which they might be aired, solutions looking for issues to which they might be the answer, and decision makers looking for work.

To gain an understanding of processes within organisations, Cohen, March & Olsen (1972) mentioned that one can view a choice opportunity as a garbage can into which various kinds of problems and solutions are dumped by participants as they are generated. The mix of garbage in a single can depends on the mix of cans available, on the labels attached to the alternative cans, on what garbage is currently being produced, and on the speed with which garbage is collected and removed from the scene. This is echoed by Kreitner & Kiniki (2008) by way of an example when explaining the processes of eliminating waste in a kitchen trash container (garbage can). Trash is randomly discarded and is mashed together based on chance interactions. Consider, for instance, going to the kitchen trash container and noticing that the used coffee grounds are stuck to a banana peel. Can it be explained how this might occur? The answer is simple: because they both were thrown in around the same time. Just like the process of mixing garbage in a trash container, the garbage can model of decision making assumes that decision making does not follow an orderly series of steps.

The garbage can model has four practical implications. First, many decisions are made by oversight or by the presence of a salient opportunity. Second, political motives frequently guide the process by which participants make decisions. Third, the decision making process is sensitive to load. Finally, important problems are more likely to be solved than unimportant ones because they are more salient to organisational participants (Kreitner & Kiniki 2008).

2.4.4 Incremental Model

The incremental model reduces complex decisions to a series of simple decisions. Thus, when a complex decision's implementation path is unpredictable, the implementation path of a series of simpler decisions seems more conceivable by the decision makers (Rahman & De Feis 2009). The 'incremental model' consists of the 'disjointed incremental model' and the 'logical incremental model'. This section will focus on the 'logical incremental model'.

Rajagopalan & Rasheed (1995) suggest that management artfully blends formal-analytical, behavioural and power-political techniques to bring about defined ends, which are also constantly refined as new information appears. This integrated methodology is best described as the process of 'logical incrementalism'. The complexity of the decision path appears less dramatic when a long term, complex decision is deconstructed into a series of shorter term, simpler decisions. For the logical incrementalism model to be relevant under complex settings, the decision at stake must be collapsible into smaller parts. Decisions that cannot be collapsed, cannot be effectively accomplished through incremental sequenced steps (Rajagopalan & Rasheed 1995).

2.4.5 Intuitive Model

There is a growing recognition that rational analysis has been overemphasized and that, in certain instances, relying on intuition can improve decision making (Robbins 2001). This is echoed by Kreitner & Kiniki (2008) who state that it is important to understand the sources of intuition and to develop intuitive skills

because it is as important as rational analysis in many decisions. Intuition is making a choice without the use of conscious thought or logical inference.

Sadler-Smith & Shefy (2004) mention that intuition is a capacity for attaining direct knowledge or understanding without the apparent intrusion of rational thought or logical inference. To assist with this they have drawn up guidelines so that intuitive awareness can be developed and used as listed in Table 2.1.

Recommendation		Description
1.	Open up the closet	How do you experience intuition; trust your feelings; count on intuitive judgments; suppress hunches; rely upon "gut" feel?
2.	Don't mix up your l's	Distinguish between your instincts, your insights, and your intuitions.
3.	Elicit good feedback	Seek feedback on your decisions; build confidence in your "gut" feel; create a learning environment.
4.	Get a feel for your batting average	Benchmark your intuitions; get a sense for how reliable your hunches are and use your intuitive judgment to improve decision making.
5.	Use imagery	Use imagery rather than words; draw pictures of future situations that take cognisance of your gut feelings.
6.	Play devil's advocate	Investigate intuitive judgments; object to them; generate an alternative scenario.
7.	Capture and validate your intuitions	Create the inner state to give your intuitive mind the freedom to roam; harness your creative side; scrutinize them before they succumb to rational analysis.

Table 2.1 Guidelines for Developing Intuitive Awareness

Adapted from Sadler-Smith, E. & Shefy, E. 2004, 'The Intuitive Executive: Understanding and Applying 'Gut Feel' in Decision-Making', *Academy of Management*, vol. 18, no.4, p88.

According to Robbins (2003), there are eight circumstances most likely for the use of intuitive decision making: when a high level of uncertainty exists; when there is little precedent to draw on; when variables are less scientifically predictable; when 'facts' are limited; when facts don't clearly point the way to go; when analytical data are of little use; when there are several plausible alternative solutions from

which to choose, with good arguments for each; and when time is limited and there is pressure to come up with the right decision.

Miller & Ireland (2005) stated that intuition can speed up decision making, which can be important in a complex, changing world. More importantly, intuition may be the only possible approach when resources are constrained such as managerial time and funds for decision support. However, they asserted that their analysis suggested that despite the increasing interest and the generally positive evaluations in articles written for executives and managers, intuition presents itself as a troubling tool. By utilizing two important definitions of intuition and explicitly considering an organisation's goals, intuition's pitfalls become clear.

This is in contrast to what Dane & Pratt (2007) have emphasized about intuition, that it can be viewed as a potential means for helping managers to make both fast and accurate decisions in organisations. In this regard, speed, in conjunction with implicit learning serve as characteristics of intuition that make intuitive judgments effective in decision making.

2.5 Decision Making Methods

Just as there are several decision models, so too are there several decision making methods in the literature. As outlined previously, decision making methods refer to the procedures, guidelines and techniques used when making a decision.

2.5.1 Nominal Group Technique / Method

As the name suggests, the nominal group technique (NGT) is a group activity. The nominal group technique or nominal group method is a process to generate ideas and evaluate solutions (Kreitner & Kiniki 2008). The nominal group technique gathers information by asking individuals to respond to questions posed by a moderator, and then asking participants to prioritise the ideas or suggestions of all group members. The process prevents the domination of the discussion by a

single person, encourages all group members to participate, and results in a set of prioritized solutions or recommendations that represent the group's preferences.

A seven step process for following the nominal group technique is suggested by Lloyd (2011) starting with the silent generation of ideas in writing. This is followed by a round-robin recording of the ideas; serial discussion; preliminary vote; discussion of the preliminary vote; final vote on priorities; with the final step of listing and agreement on prioritised items. Kreitner & Kiniki (2008) further state that the nominal group technique reduces the roadblocks to group decision making by separating brainstorming from evaluation; promoting balanced participation among group members; and incorporating mathematical voting techniques in order to reach consensus.

Thompson (2003) suggests one variation to the nominal group technique. After ideas are written down, they are collected and shuffled together similar to a pack of cards. This is then randomly distributed and then read out aloud. This creates greater acceptance of others' ideas and prevents the domination of only some ideas. The nominal group technique has been successfully used in many different decision making situations and has been found to generate more ideas than a standard brainstorming session.

2.5.2 Delphi Technique / Method

The Delphi technique is a group process that anonymously generates ideas or judgments from physically dispersed experts. Eskandari, Sala-Diakanda, Furterer, Rabelo, Lesia Crumpton-Young, & Williams (2007) explains that the Delphi technique is a systematic procedure which collates the opinions of a diverse group of experts located in different geographical areas whose opinions are important for decision analysis. Through the Delphi technique, different responses and views are obtained on the underlying problem resulting in the generation of new ideas and unique suggestions, and eventually gains consensus on the findings among a panel of experts. Furthermore, Eskandari et al. (2007) stated that a conventional Delphi method starts with an open-ended questionnaire and the participants are asked to respond to the questions. A second questionnaire composed of collated

information and calculated statistics obtained from the first round questionnaire is sent out asking the respondents to potentially revise their opinions, or agree with the rankings obtained regarding the problem under study. This process continues until consensus is gained among the respondents or the research team determines that they have acquired sufficient data for the study.

Kreitner & Kiniki (2008) noted that the Delphi technique is useful when face-to-face discussions are impractical; when disagreements and conflict are likely to impair communication; when certain individuals might severely dominate group discussion; and when groupthink is a probable outcome of the group process.

2.5.3 Management Science / Computer Aided Decision Making

The management science method uses sequential steps in a clear and precise manner to make decisions. Simon (1977) suggested that the problem needs to be identified; alternatives identified; some criteria developed; alternatives evaluated relative to the criteria; choosing an alternative; implementing the decision; and finally analysing the results.

Rahman & De Feis (2009) noted that management science may be viewed as a decision making approach or procedure. Those who are seeking to identify 'how much, what size and what dimensions', would be able to use this quantitative approach. The management science method uses measurement, applies theories or models, uses experiments in conjunction with mathematical models, linear programming, PERT charts and computer simulations to establish the quantitive aspect of management.

Kreitner & Kiniki (2008) preferred to focus on computer aided decision making by stating that it is used to help managers make better decisions by reducing consensus roadblocks while collecting more information in a shorter period of time. Furthermore, research demonstrated that computer aided decision making produced greater quality and quantity of ideas that either traditional brainstorming or the nominal group technique for both small and large groups.

2.5.4 Environmental Scanning Method

The environmental scanning method is the acquisition and use of information about events, trends, and relationships in an organisation's external environment (Rahman & De Feis 2009). Organisations scan the environment in order to understand the external forces of change so that they may develop effective responses to improve their position in the future. An organisation will also scan the environment in order to avoid surprises, identify threats and opportunities, gain competitive advantage, and improve long term and short term planning.

Auster & Choo (1993) further assert that the amount of environmental scanning increases with the level of perceived environmental uncertainty. Environmental scanning is done using multiple, complementary sources: internal and external sources, as well as personal and impersonal sources. Personal sources (managers, staff, customers, associates) are among the most frequently used, while the company library and electronic information services are not frequently used. Rahman & De Feis (2009) stated that environmental scanning is a description of information behaviour that is composed of information needs, information seeking and information use.

2.6 Decision Making Styles

A decision making style reflects the combination of how an individual perceives and comprehends stimuli and the general manner in which they choose to respond to such information (Kreitner & Kiniki 2008). There are four generally agreed upon styles of decision making. These are directive, analytic, conceptual, and behavioural (Kreitner & Kiniki 2008; Robbins 2001). Robbins (2001) focuses on the 'way people think' and their 'tolerance for ambiguity' whereas Kreitner & Kiniki (2008) focus on their 'value orientation' and their 'tolerance for ambiguity'.

The four decision making styles are shown in Figure 2.2.

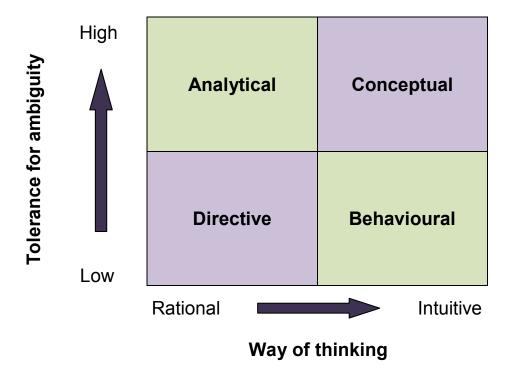


Figure 2.2 Decision Making Styles

Adapted from Rowe, A.J. & Boulgarides, J.D. 1992. *Managerial Decision Making*, Prentice Hall, Upper Saddle River, New Jersey, p29.

The directive style has a low tolerance for ambiguity and seeks rationality. Such decision makers are efficient and logical, but their efficiency concerns result in decisions made with minimal information and with few alternatives assessed (Robbins 2001). Furthermore, the directive style is oriented towards task and technical concerns which is efficient, logical, practical and systematic in the approach to solving problems (Kreitner & Kiniki 2008).

The analytic style decision maker has a greater tolerance for ambiguity which leads to the desire for more information and consideration for more alternatives (Robbins 2001). The analytic style is also characterised by the tendency of decision makers to overanalyse a situation by being careful and thus take longer to make decisions but also respond well to new or uncertain situations, however, they can often be autocratic (Kreitner & Kiniki 2008).

The conceptual style tends to be very broad in the outlook of individuals and considers many alternatives with the focus being on the long range which enables creative solutions to be found (Robbins 2001). The conceptual style has a high tolerance for ambiguity and tends to focus on the people or social aspects of work. The conceptual style is willing to take risks and rely on intuition and discussions with others to acquire information. On the downside, this can foster an idealistic and indecisive approach to decision making (Kreitner & Kiniki 2008).

The behavioural style is the most people oriented of the four styles. The behavioural style is concerned with the achievement of peers and those working for them and is receptive to suggestions from others, relying heavily on meetings for communication (Robbins 2001). The behavioural type decision maker is supportive, receptive to suggestions, shows warmth and prefers verbal to written information. This can lead to a "wishy-washy" approach to decision making and some have difficulty in saying "NO" and have a challenge in making complicated decisions (Kreitner & Kiniki 2008).

Very few people have only one dominant decision making style. Most have characteristics that fall into two or three styles. Decision making styles vary by age, occupations, job level and country (Kreitner & Kiniki 2008). Focusing on decision styles can be useful for helping understand how two equally intelligent people, with access to the same information, can differ in the ways they approach decisions and the final choices they make (Robbins 2001).

2.7 Groupthink

Although 'groupthink' could be discussed in conjunction with other group decision making models and methods, it is sufficiently important to warrant its own section. 'Groupthink' is a phrase coined by Irving Janis and is commonly referred to as 'Janis groupthink' which emanated from research in the seventies (Janis 1972) where it was found that groupthink occurs when group members' motivation, unanimity and agreement overrides their motivation to evaluate carefully the risks and benefits of alternative decisions. Janis noticed certain similarities when

studying group decision making that contribute to groupthink which are listed in Table 2.2.

1. Illusion of invulnerability	Cohesive decision making group members see themselves as powerful and invincible. They tend to ignore the potential disastrous outcomes of their decision.
2. Illusion of morality	Members believe in the moral correctness of the group and its decision; related to the first symptom. Derived from the 'we-they feeling', members view themselves as the "good guys" and the opposition as bad or evil.
3. Shared negative stereotypes	Members have common beliefs that minimise the risks involved in a decision.
4. Collective rationalisations	The members explain away any negative information that runs counter to the group decision.
5. Self-censorship	Members suppress their own doubts of criticisms concerning the decision.
6. Illusion of unanimity	Members mistakenly believe that the decision is a consensus. Since dissenting viewpoints are not voiced, silence indicates support.
7. Direct conformity pressure	Pressure is applied to get the nonconformist to concur with the decision when an opposing view or a doubt is expressed.
8. Mind guards	Some members play the role of protecting or insulating the group of any opposing opinions or negative information.

Table 2.2 The Eight Symptoms of Groupthink

Adapted from Riggio, R.E. 2003, Introduction to Industrial / Organizational Psychology, 4th ed. Prentice Hall, Upper Saddle River, New Jersey. p.332.

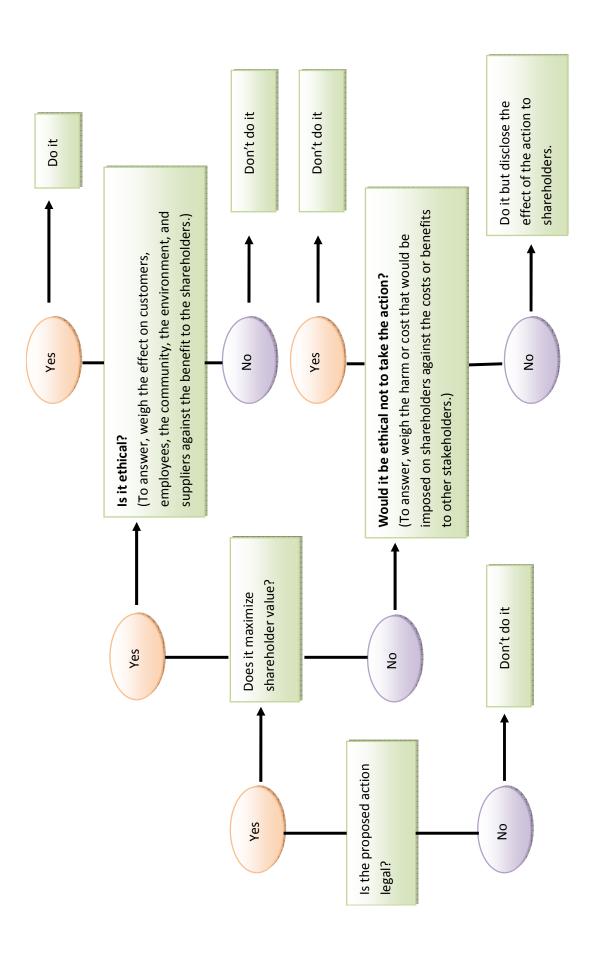
Groupthink usually occurs only in highly cohesive groups in which the members' desire to maintain cohesiveness overrides the sometimes uncomfortable and disruptive process of critical decision making (Riggio 2003; Arnold 2004). Cohesive groups are groups where members are friendly with each other, and respect each other's opinions. Disagreement is such group is construed, usually unconsciously, as a withdrawal of friendship and respect.

Janis (1982) argued that certain measures can be taken to avoid groupthink. These include: impartial leadership (so that group members are not tempted simply to 'follow the leader'); each person in the group should be told to give high priority to airing doubts and objections; experts should be in attendance to raise doubts; and 'second chance' meetings should be held where members express their doubts about a previously made but not yet implemented decision.

2.8 Ethical Decision Making

At first glance, ethical decision making in organisations may seem obvious but if geography and other differences are taken into account, then ethical decision making is not so obvious. What may be seen as an ethical decision in the west may not be seen as ethical in the east. This reason is that there are no global standards (Robbins 2001).

By taking differences of geography into account and trying to create a framework that has universal appeal, Bagley (2003) has proposed the use of an ethical decision tree. A decision tree is a graphical representation of the process underlying decisions and it shows the resulting consequences of making various choices. Decision trees are used as an aid in decision making (Kreitner & Kiniki 2008). The decision tree is shown in Figure 2.3.



Adapted from Bagley, C. 2003. 'The Ethical Leaders Decision Tree', Harvard Business Review, vol.81, no. 2, p19

Figure 2.3 The Ethical Leader's Decision Tree

It is important to keep in mind that the decision tree cannot provide a quick formula that managers and organisations can use to access every ethical question. It does, however, provide a framework for considering the trade-offs between managerial and corporate actions and managerial and corporate ethics (Kreitner & Kiniki 2008). However, Bazerman (2006) warns that people often fail to notice the ethical components of decisions because of the innate tendency of individuals to engage in self-deception and to engage in "ethical cleansing" to transform ethical decisions into ones that lack ethical implications.

Dessler (2002) suggests five steps that need to be taken in the workplace to foster ethics: the emphasis by top management's commitment; the publication of a code; the establishment of compliance mechanisms; the involvement of personnel at all levels; and the measurement of results. However, Boddy (2002) is more practical by concluding that ethical decision making is a question of trade-offs, and it is necessary to have a clear idea of who will be affected. While some businesses declare themselves to be ethical, many find it easier to think of the responsibilities they have, and to whom they are accountable. The idea of corporate social responsibility makes abstract dilemmas more real, and helps managers reach decisions.

2.9 Indecision

The job of the CEO is to make decisions but if those decisions are to have an impact, the organisation must also, as a whole, decide to carry them out. Organisations that don't, suffer from a culture of indecision (Charan 2006). Indecision in organisations creates uncertainty with a consequential effect on performance. Charan (2006) stated that individuals charged with reaching a decision and acting on it fail to connect and engage with one another. One of the reasons for this is that individuals are intimidated by group dynamics, hierarchy and are constrained by formality and lack of trust, thus making decisions without conviction. Due to the lack of emotional commitment individuals were unable to act decisively but that a decisive organisation is rewarded with a productive workforce (Charan 2006).

In order to break the culture of indecision, a leader who can engender intellectual honesty and trust in the connections between people is required. Honest and decisive dialogue is the first step that sets the tone for the entire organisation and thus transforms the culture of indecision (Charan 2006). Tightly linked and consistently practiced mechanisms for meetings, strategy reviews, and budget assessments, establish clear lines of accountability for reaching and executing decisions. Follow-through and feedback are the final steps in creating a decisive culture where high achievers are rewarded. These high achievers are able to coach those who are struggling and redirect the behaviours of those people who are indecisive (Charan 2006). Research showed that leaders can eradicate indecision by transforming the tone and content of everyday conversations at their organisation.

2.10 Summary

In this chapter it was established that decision making is a multi-faceted and complex subject. Decision making has a range of different models, styles, methods, and techniques that sometimes creates more questions than it answers. The literature review provided a background and context to the topic of decision making which determined that there is a fine line between individual and group decision making and that sometimes it is almost interchangeable. The literature also provided insight into the different decision making models, such as the rational model, Simon's normative model, the garbage model, the incremental model, and the intuitive model. Decision making methods, such as the nominal group technique, Delphi technique, management science method, and the environmental scanning method has been discussed. The literature review also examined various decision making styles, Janis Groupthink, and ethical decision making. The effects of indecision on individuals and organisations were also discussed. The next chapter will discuss the aims and objectives and will detail the research methodology of this study.

CHAPTER THREE

Research Methodology

3.1 Introduction

Managers in organisations constantly engage themselves in studying and analysing issues and hence are involved in some form of research activity as they make decisions at the work place. Business research is an organised, systematic, data-based, critical, objective investigation into a specific problem, undertaken with the purpose of finding answers to it. Research that is done to enhance the understanding of certain problems that commonly occur in organisational settings, and seek methods at solving them is called basic, fundamental or pure research (Sekaran 2003). This study will investigate and draw on the methodologies and tools found in the literature that underpin academic research.

3.2 Aim and Objectives of the Study

3.2.1 Aim

The aim of this study is to determine the effect of decision making and indecision on organisations and to critically evaluate the attitudes and perceptions of decision makers on organisational effectiveness.

3.2.2 Objectives

This study will focus on the following objectives to determine the impact of decision making on organisations.

- To determine the effect of organisational structures and mechanisms on decision making.
- To evaluate employee views and opinions on decision making.

- To evaluate the effect of training and support on decision making.
- To establish the level of confidence of employees in decision making.
- To determine whether employees perform research before making decisions.

3.3 Target Audience

This study will target decision making staff in organisations in Durban. Due to the nature of this study, middle management and senior management will be specifically targeted. The target audience will be drawn from the Durban metropolis which is biased towards the manufacturing and services sector. Durban has a large pool of experienced middle and senior managers who are able to provide valuable information for this study.

3.4 Sampling

The population refers to the entire group of people, events, or things that the researcher wishes to investigate. A sample is a subgroup or subset of the population (Sekaran 2003). By contrast, if data is collected and analysed from every possible case or group member, it is termed a census (Saunders, Lewis & Thornhill 2003). Sampling can be intuitively understood by most people, the basic idea of sampling is that by selecting some of the elements in a population, conclusions can be drawn about the entire population (Cooper & Schindler 2001).

Hair, Wolfinbarger, Ortinau & Bush (2008) stated that sampling is a selection of a small number of elements from a larger defined target group of elements, expecting that the information gathered from the small group will enable judgments to be made about the larger group. Coldwell & Herbst (2004) add that when dealing with people, a sample can be defined as a set of the respondents (people) selected from a larger population for the purpose of a survey.

There are two primary sampling techniques: probability and non-probability (Coldwell & Herbst 2004; Hair et al 2008; Sekaran 2003). Saunders, Lewis &

Thornhill (2003) refers to these sampling techniques as probability which is representative sampling and non-probability which is judgemental sampling.

Probability or representative sampling is based on the principle that each sampling unit in the defined target population has a known probability of being selected for the sample. The actual probability of selection for each sampling unit may or may not be equal depending on the type of probability sampling (Hair et al 2008). The great advantage of probability sampling is that when the sampling frame is complete and the samples are adequate, the result is unbiased and representative of the population (Coldwell & Herbst 2004).

In non-probability or judgemental sampling, the probability of selecting each sampling unit is not known. Therefore, the sampling error is not known. Selection of sampling units is based on intuitive judgments or researcher knowledge (Hair et al 2008). Sekaran (2003) added that the findings from the study of a sample cannot be confidently generalised to the population.

Probability sampling is refined into several further techniques. These include but are not limited to: unrestricted or simple random sampling; restricted or complex probability sampling; systematic sampling; stratified random sampling; proportionate and disproportionate stratified random sampling; cluster sampling; single-stage and multistage cluster sampling; area sampling; and double sampling (Sekaran 2003).

Non-probability sampling techniques include convenience sampling; purposive sampling; and snowball sampling (Coldwell & Herbst 2004; Hair et al 2008; Saunders, Lewis & Thornhill 2003; Sekaran 2003). A convenience sample is used when samples are drawn based on pure convenience. The convenience sample is the least reliable design but normally the cheapest and easiest to conduct. Researchers have the freedom to choose whomever they find willing and able to participate, thus the name convenience (Coldwell & Herbst 2004). Cooper & Schindler (2001) and Sekaran (2003) add that purposive sampling is made up of judgment sampling and quota sampling.

Judgment sampling occurs when a researcher selects sample members to conform to some criterion (Cooper & Schindler 2001) and involves the choice of subjects who are the most advantageously placed or in the best position to provide the information required (Sekaran 2003).

The sampling technique used for this study is a purposive judgment non-probability sample. In organisation settings, opinion leaders who are very knowledgeable are included in the sample. Enlightened opinions, views, and knowledge constitute a rich data source (Sekaran 2003). Judgment sampling may curtail the generalisability of the findings, due to the use of a sample of experts that are conveniently available. However, judgment sampling is the only available sampling method for obtaining the type of information that is required from very specific pockets of people who alone possess the needed facts and can give the information sought (Sekaran 2003). Purposive judgment non-probability sample was used knowing that the participants were very knowledgeable and that by sharing their views and opinions, they would add value to this study. The sample used in this study is drawn from managers and senior decision makers in organisations.

3.5 Sample Size

In probability sampling, three factors play an important role in determining the sample size: the variability of the population characteristic under investigation; the level of confidence desired in the estimate; the degree of precision desired in estimating the population characteristic (Hair et al 2008). Cooper & Schindler (2001) added that the sample must be large or it is not representative and that the sample should bear some proportional relationship to the size of the population from which it is drawn. In non-probability sample sizes, formulas cannot be used (Cooper & Schindler 2001). Hair et al (2008) added that determining the sample size for non-probability samples is usually subjective, intuitive, judgment made by the researcher based on either past studies, industry standards, or the amount of resources available. Saunders, Lewis & Thornhill (2003) stated that for non-probability sampling, the issue of sample size is ambiguous. Saunders, Lewis & Thornhill (2003) add that unlike probability samples, there are no rules. Non-

probability sample sizes depends on the research questions and objectives – in particular what needs to be found out, what will be useful, what will have credibility, and what can be done within the available resources (Saunders, Lewis & Thornhill 2003). The sample size in this study is 117. According to Statistics South Africa (2009), the employment statistics for Durban Metro (Gazetted name: eThekwini), there were 810 761 people employed as of March 2007. According to The Research Advisors (2006), a sample size of 384 should be used for a population of 1 000 000 at a confidence level of 95% and a 5% margin of error. However, according to The Research Advisors (2006), a sample size of 96 could be used for a population of 1 000 000 at a confidence level of 95% and a 10% margin of error.

3.6 Quantitative vs Qualitative Research

According to Bryman & Bell (2007) quantitative research emphasises quantification in the collection and analysis of data that entails a deductive approach to the relationship between theory and research; has the practices and norms of the natural scientific model; and embodies a view of social reality as an external, objective reality. Bryman and Bell (2007) further state that qualitative research emphasises words rather than quantification in the collection and analysis of data that predominately emphasizes an inductive approach to the relationship between theory and research; has rejected the practices and norms of the natural science model; and embodies a view of social reality as a constantly shifting emergent property of individuals' creation.

Quantitative research uses formal questions and predetermined response options in questionnaires administered to large numbers of the respondents whereas qualitative research is the collection of data in the form of text or images using open-ended questions or observation (Hair et al 2008).

There are major differences between quantitative and qualitative research which are listed in Table 3.1.

Factor	Qualitative Methods	Quantitative Methods		
Goals/Objectives	Discovery / identification of new ideas,	Validation of facts, estimates,		
	thoughts, feelings; preliminary	relationships		
	understanding of relationships; predictions;			
	understanding of hidden psychological and			
	social processes			
Type of Research	Exploratory	Descriptive and causal		
Type of Questions	Open-ended, unstructured, probing	Mostly structured		
Time of Execution	Relatively short time frame	Typically significantly longer		
		time frame		
Representativeness	Small samples, only the sampled	Large samples, with proper		
	individuals	sampling can represent		
		population		
Type of Analysis	Debriefing, subjective, content analysis,	Statistical, descriptive, causal		
	interpretative	predictions		
Researcher Skill	Interpersonal communication, observation,	Statistical analysis,		
	interpretation of text or visual data	interpretation of numbers		
Generalisability	Limited	Generally very good, can		
		infer facts and relationships		

Table 3.1 Major Differences between Qualitative and Quantitative Research

Adapted from Hair, J.F., Wolfinbarger, M.F., Ortinau, D.J. & Bush, R.P. 2008, *Essentials of Marketing Research*, McGraw-Hill Irwin, New York. p.81

Bryman & Bell (2007) provide additional differences stating that quantitative researchers conduct research in a contrived context whereas qualitative researchers investigate people in their natural environments. Bryman & Bell (2007) also add that in quantitative research, the point of view of the researcher provides the point of orientation for the study whereas in qualitative research, the respondent provides the point of orientation for the study.

There are advantages and disadvantages to qualitative research and quantitative research. Hair et al (2008) state that the advantages of qualitative research are

that it can be completed relatively quickly; there is richness of data; and it provides preliminary insights into building models and scale measurement. Furthermore, they stated that the disadvantages of qualitative research include a lack of generalisability; there is difficulty in estimating the magnitude of the phenomena being investigated; and that there is low reliability.

Bryman & Bell (2007) state the advantages of quantitative research are measurement; causality; generalisation; and replication. Qualitative research is useful to understand the impact of culture or sub-culture on decision making and to probe unconscious or hidden motivations that are not easy to access using quantitative research (Hair et al 2008). Bryman & Bell (2007) further state that the disadvantages of quantitative research are the researchers failure to distinguish people and social institutions from the 'world of nature'; the reliance on instruments and procedures hinders the connection between research and everyday life; and the analysis of relationships between variables creates a static view of social life which is independent of people's lives.

3.7 Data Collection Techniques

Hair et al (2008) stated that to select a data collection method, the researcher must determine the data requirements to achieve each objective and the type of information that is desired. Data collection methods include interviews – face-to-face interviews, telephone interviews, computer-assisted interviews (Sekaran 2003). Sekaran (2003) adds that data can be collected from questionnaires that are personally administered, sent through the mail, or electronically administered. Cooper & Schindler (2001) stated that data collection may result from interviews or telephone conversations; self-administered or self-reported instruments sent through the mail, left in convenient locations, or transmitted electronically or by other means; or instruments presented before and/or after a treatment or stimulus condition in an experiment. In this study, an online questionnaire and a printed version of the questionnaire was used (Appendix 1). Sekaran (2003) notes that online questionnaire surveys are easily designed and administered. With the availability and use of the internet, the administration of the questionnaire has been relatively successful.

3.8 Questionnaire and Questionnaire Design

McDaniel & Gates (2010) mentioned that a questionnaire is a set of questions designed to generate the data necessary to accomplish the objectives of the research project; it is a formalised schedule for collecting information from the respondents. This is reinforced by Hair, Bush & Ortinau (2006) stating that a questionnaire is a formalised framework consisting of a set of questions and scales designed to generate primary data. Churchill & Brown (2007) stated that an internet-based questionnaire is a questionnaire that relies on the internet for recruitment and/or completion either via e-mail surveys or questionnaires completed on a website.

Designing a questionnaire involves a series of logical steps (McDaniel & Gates 2010). They suggest that in step one the researcher should determine the survey objectives, resources and constraints. The survey objectives should be spelled out as clearly and precisely as possible. In step two, the data collection method is determined. In step three, the question response format is determined. There are three major types of questions: open ended; closed ended; and scaled-response questions. In step four, the researcher has to decide on the question wording. Step five establishes the questionnaire flow and layout. Step six is used to evaluate the questionnaire. The approval from all relevant parties is obtained in step seven. In step eight, pretesting and revision is critical. It is vitally important that a pretest is administered on a test audience. The preparation of the master questionnaire is finalised in step nine. The implementation of the survey is the final step (McDaniel & Gates 2010).

Good questionnaires enable researchers to gain a true report of the respondents' attitudes, preferences, beliefs, feelings, behavioural intentions, and actions. Through carefully worded questions and clear instructions, a researcher has the ability to focus respondents' thoughts to ensure answers that are representative and accurate (Hair et al 2008). The questionnaire for this study made use of questions that were asked in the positive and to test reliability the same question was asked in the negative.

3.9 Questionnaire Pretesting and Validation

Pretesting the questionnaire is an important step in making sure that the research project is a success. Similarly, reliability and validity are important characteristics in the measurement of data.

3.9.1 Pretesting the Questionnaire

Pretesting is the use of the questionnaire on a trial basis in a small pilot study to determine how well the questionnaire works (Churchill & Brown 2007). In a pretest, researchers look for misinterpretations by the respondents, lack of continuity, poor skip patterns, additional alternatives for precoded and closed-ended questions, and general respondent reaction to the instrument (McDaniel & Gates 2010). Preliminary analysis using the pilot data can be undertaken to ensure that the data collected will enable the research questions to be answered (Saunders, Lewis & Thornhill 2003).

In this study, the questionnaire was pretested on MBA students as well as their contact base. All the pretest respondents fitted the profile of the target population. A pretest questionnaire was setup on Surveymonkey and a link was generated to the electronic questionnaire. A version of the questionnaire was also generated using Microsoft Word. Printed versions of the questionnaire were handed out to MBA students to speed up the pretest phase. Individuals were emailed the Surveymonkey link as well a soft copy of the Microsoft Word version questionnaire. A telephone call as well as a follow up email was sent to pretest respondents to maximise compliance. Pretesting involved eighteen respondents. Feedback was then obtained orally and via email. Pretest respondents of the online questionnaire provided valuable advice which was then used to refine the questionnaire. The questionnaire was modified and improvements were made to the numbering and flow of questions in Surveymonkey. The Microsoft Word questionnaire was left unchanged.

The pretest is the most inexpensive "insurance the researcher can buy" to ensure the success of the questionnaire and the research project. A careful pretest makes the questionnaire development process successful (Churchill & Brown 2007).

3.9.2 Validation of the Questionnaire

The measurement of data requires that the data is checked for reliability and validity. Reliability refers to the ability of a measure to obtain consistent scores for the same object, trait, or construct across time, across different evaluators, or across the items forming the measure (Churchill & Brown 2007).

McDaniel & Gates (2010) add that there are three ways to assess reliability: testretest, the use of equivalent forms, and internal consistency. Test-retest reliability
is obtained by repeating the measurement with the same instrument to produce
consistent results when used a second time under conditions as similar as
possible to the original conditions. Equivalent form reliability is determined by
measuring the correlation of scores on two instruments to produce closely
correlated results. Internal consistency reliability is the ability of an instrument to
produce similar results when used on different samples during the same time
period to measure a phenomenon (McDaniel & Gates 2010).

The theory of internal consistency rests on the concept of equivalence. Equivalence is concerned with how much error may be introduced by using different samples of items to measure a phenomenon. A researcher can test item equivalence by assessing the homogeneity of a set of items by using the Cronbach alpha technique (McDaniel & Gates 2010).

Cronbach's alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. Cronbach's alpha is computed in terms of the average intercorrelations among the items measuring the concept. The closer Cronbach's alpha is to 1, the higher the internal consistency reliability (Sekaran 2003). However, a measure could be reliable but not necessarily valid. A reliable measure is just consistent – it may not be measuring the right thing, but it returns consistent scores (Churchill & Brown 2007).

Validity is a characteristic of measurement concerned that a test measures what the researcher actually wishes to measure (Cooper & Schindler 2001) and the degree to which the researcher was trying to measure was actually measured (McDaniel & Gates 2010).

There are several ways of establishing validity: face validity; concurrent validity; predictive validity; construct validity; and convergent validity (Bryman & Bell 2007). However, McDaniel & Gates (2010) suggest that validity is established using: face validity; content validity; criterion-related validity; and construct validity. Furthermore, Churchill & Brown (2007) use the terms face validity and content validity interchangeably and also state that criterion-related validity is sometimes called predictive validity.

Sekaran (2003) noted that content validity ensures that the measure includes an adequate set of items that tap the concept to be measured and that it is a function of how well the dimensions and elements of a concept have been delineated. Criterion-related validity is established when the measure differentiates individuals on a criterion it is expected to predict (Sekaran 2003). Predictive validity or criterion-related validity is the usefulness of the measuring instrument as a predictor of some other characteristic or behaviour of the individual (Churchill & Brown 2007).

Constructs are specific types of concepts that exist at higher levels of abstraction than do everyday concepts. Examples of constructs include, brand loyalty, social class, personality, motivation, racial bias, and creativity. Construct validity is the degree to which a measurement instrument represents and logically connects, via the underlying theory, the observed phenomenon to the construct (McDaniel & Gates 2010). Sekaran (2003) added that construct validity testifies to how well the results obtained from the use of the measure fit the theories around which the test is designed.

All types of validity are somewhat interrelated in both theory and practice. Sound measurement must meet the tests of reliability and validity. A measure is reliable

if it provides consistent results. Reliability is a partial contributor to validity, but a measurement tool may be reliable without being valid (Cooper & Schindler 2001).

3.10 Data Analysis Methods

Data analysis is now routinely done on software programs such as SPSS and Excel (Sekaran 2003). However, due to the variety and complexity of the different techniques and tests used in the analysis of data, this study will focus on a small subset of the available techniques. Descriptive statistics and inferential statistics are the two major categories of statistical procedures.

3.10.1 Descriptive Statistics

Churchill & Brown (2007) mentioned that descriptive statistics describe the distribution of responses on a variable, including measures of central tendency (mean, median, and mode); measures of the spread, or variation, in the distribution (range, variance, and standard deviation). Cooper & Schindler (2001) added that the common measures of location, often called central tendency or centre, include the mean, median, and mode.

The mean is the arithmetic average. It is the sum of the observed values in the distribution divided by the number of observations. The median is the midpoint of distribution. Half the observations in the distribution fall above and the other half fall below the median. The mode is the most frequently occurring value (Cooper & Schindler 2001).

Measures of spread, alternatively referred to as dispersion of variability, are the variance, standard deviation, range, interquartile range, and quartile deviation (Cooper & Schindler 2001). Measures of dispersion describe how close to the mean or other central tendency the rest of the values in the distribution fall (Hair, Bush & Ortinau 2006).

The standard deviation describes the average distance of the distribution values from the mean. The difference between a particular response and the distribution mean is called a deviation. Since the mean of a distribution is a measure of central tendency, there should be about as many values above the mean as there are below it (Hair, Bush & Ortinau 2006). Cooper & Schindler (2001) add that the standard deviation summarises how far away from the average the data values typically are. It is perhaps the most frequently used measure of spread because it improves interpretability by removing the variance's square and expressing deviations in their original units.

The variance is the average of the squared deviation scores from the distribution's mean. It is a measure of score dispersion about the mean, If all the scores are identical, the variance is zero (Cooper & Schindler 2001). The variance is computed by summing the squared distance from the mean for all cases and dividing the sum by the total number of cases minus one (Cooper & Schindler 2001). Hair, Bush & Ortinau (2006) add that the number one is subtracted to help produce an unbiased estimate.

3.10.2 Inferential Statistics

Statistical inference is an application of inductive reasoning. Inductive reasoning moves from specific facts to general, but tentative conclusions. It allows us to reason from evidence found in the sample to conclusions we wish to make about a population (Cooper & Schindler 2001). Since a sample will almost surely vary somewhat from its population, a judgement must be made whether these differences are statistically significant or insignificant. A difference has statistical significance if there is good reason to believe the difference does not represent random sampling fluctuations only (Cooper & Schindler 2001).

There are two general classes of significance tests: parametric and nonparametric. A variety of nonparametric tests may be used in a one-sample situation, depending on the measurement scale used and other conditions (Cooper & Schindler 2001). The most widely used nonparametric test of significance is the chi-square (x^2) test. Chi-square is useful in cases where persons, events, or

objects are grouped in two or more nominal categories such as "yes-no," "for-undecided-against," or class "A, B, C, or D." Chi-square is calculated with actual counts rather than percentages (Cooper & Schindler 2001).

Correlation is the degree to which changes in one variable (the dependent variable) are associated with changes in another. When the relationship is between two variables, the analysis is called bivariate correlation analysis (McDaniel & Gates 2010). Bryman & Bell (2007) further add that correlation is the analysis of relationships between ratio variables and/or ordinal variables that seek to assess the strength and direction of the relationship of the variables concerned. Pearson's *r* and Spearman's *rho* are methods of assessing the level of correlation (Bryman & Bell 2007).

Hair et al (2008) state that the Pearson (product moment) correlation coefficient (*r*) measures the degree of linear association between two metric variables. The range of the coefficient (r) varies between 1.00 (a total positive association) through 0 (absolutely no association) to -1.00 (a total negative association).

Similarly, the Spearman rank order correlation coefficient *(rho)* measures the linear association between two variables where both variables have been measured using ordinal (rank order) scales (Cooper & Schindler 2001).

However, the differences between Pearson's r and Spearman's rho must be emphasised. The Pearson (product moment) correlation coefficient is useful when two variables being measured are interval or ratio scales. The Spearman rank order correlation coefficient is the recommended statistic to use when two variables have been measured using ordinal scales. If either one of the variables is represented by rank order, the best approach is to use Spearman rank order correlation coefficient, rather than the Pearson correlation (Hair et al 2008).

Some rules of thumb for the interpretation of the coefficients are listed in Table 3.2.

Rules of Thumb about the Strength of Correlation Coefficients				
Range of Coefficient	Description of Strength			
± 0.81 to ± 1.00	Very Strong			
±0.61 to ±0.80	Strong			
±0.41 to ±0.60	Moderate			
±0.21 to ±0.40	Weak			
±0.00 to ±0.20	Weak to No Relationship			

Table 3.2 The strength of correlation coefficients

Adapted from Hair, J.F., Wolfinbarger, M.F., Ortinau, D.J. & Bush, R.P. 2008. *Essentials of Marketing Research*. McGraw-Hill Irwin, New York. p287.

3.11 Summary

Research methodology at first glance is somewhat of an intimidating subject, but it is simply the process of finding solutions to a problem after a thorough study and analysis of data. In this study, the research methodology followed vigorous processes as is required in academia. In this chapter, the aims and objectives were stated. This was followed by the classification of the target audience. The function of sampling and sample size was established where it became apparent that this study will use purposive judgment non-probability sampling. Data collection techniques were discussed with the online questionnaire format being chosen as the most suitable for this study. The data from the questionnaire will be analysed using SPSS. The data will be presented in Chapter Four.

CHAPTER FOUR

Results

4.1 Introduction

Data needs to be useful to an organisation. In order for data to become useful, it must first be organised, categorised, analysed, and then shared within an organisation. It is not helpful to conduct a sophisticated research project if the researcher cannot communicate the results effectively. The primary goal of the research process is to provide solid, usable information to an organisation that will be used in the decision making process so that important decisions can be made. Creating a well written, effect report requires time, knowledge, skill and attention to detail. The results of the research are presented in this chapter.

4.2 Reliability Evaluation Using Cronbach Alpha

Cronbach's alpha is a reliability coefficient that indicates how well the items in a construct are positively correlated to one another (Sekaran 2003). Reliability refers to the ability to obtain consistent scores for the same construct (Churchill & Brown 2007). The objectives of this study are equivalent to a construct. Each objective has an associated set of questions with Cronbach's alpha being computed. Table 4.1 outlines the results of the reliability test.

	Objectives	No of Questions	Cronbach Alpha	
1.	Effect of organisational structures and mechanisms	2	0.772	
2.	Evaluate staff views and opinions	5	0.789	
3.	Effect of training and support	3	0.649	
4.	Establish level of staff confidence	6	0.737	
5.	Determine whether staff perform research	2	0.673	

Table 4.1 Instrument reliability using Cronbach alpha

It can be noted from Table 4.1 that the Cronbach alpha for each objective ranged from alpha 0.649 to alpha 0.789. The impact that these numbers have on the research will be further discussed at the end of each objective.

Cronbach alpha with a value of 0.80 is typically used as a rule of thumb to indicate an acceptable level of internal reliability (Bryman & Bell 2007). A computed alpha coefficient will vary between 1 (denoting perfect internal reliability) and 0 (denoting no internal reliability). However, for rating purposes, the following scale was suggested by Bryman & Bell (2007): a coefficient of 0.75 or higher is considered very good; between 0.60 and 0.75, it is considered good; and between 0.4 and 0.6, it is regarded as fair. Hair, Bush & Ortinau (2006) also state that the coefficient value can range from 0 to 1, and a value of less than 0.6 would typically indicate marginal to low internal consistency. It is evident that two out of the five objectives yielded very good alpha's and the remaining three yielded good alpha's suggesting that the data is reliable.

4.3 Descriptive Statistics of the Independent Variables

Descriptive statistics are used to summarise and describe data from a sample of the respondents (Hair, Bush & Ortinau 2006). The independent variable influences the dependent variable and accounts for, or explains, its variance (Sekaran 2003). To establish relationships, the following independent variables were analysed: age; gender; position at work; and sector.

4.3.1 Age of the Respondents

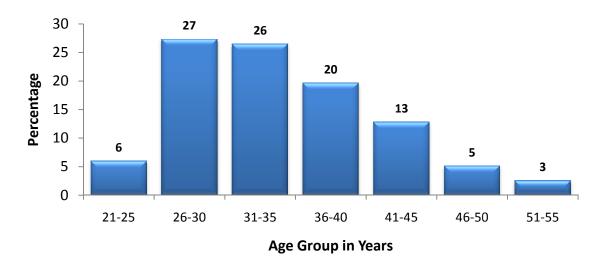


Figure 4.1 Distribution of responses by age group

The data in Figure 4.1 reveals the age group of the respondents. The respondents were classified into ten groups ranging in age from years 21-25 to year 66+. The data reveals that there were zero respondents in the three age groups of 56-60; 61-65; and 66+. In contrast more than three quarters of the respondents fell in the three age groups of 26-30; 31-35; and 36-40. The data further reveals that 6% of the respondents were in the 21-25 age group; 27% in the 26-30 age group; 26% in the 31-35 age group; 20% in the 36-40 age group; 5% in the 46-50 age group; and 3% in the 51-55 age group.

4.3.2 Gender of the Respondents

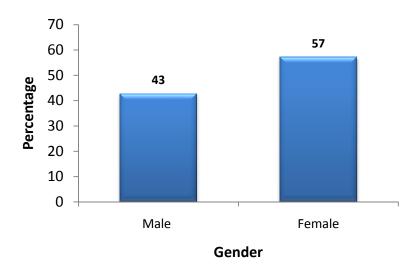


Figure 4.2 Distribution of responses by gender

As illustrated in Figure 4.2, the majority of respondents were female with 57% compared to male respondents with 43%.

4.3.3 Respondents Position at

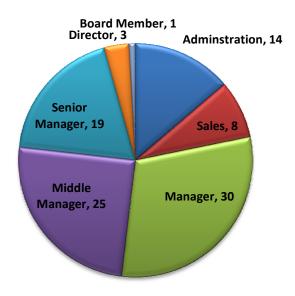


Figure 4.3 Distribution of responses by position at work

It is evident from Figure 4.3 that over three quarters (78%) of the respondents were in managerial positions. The data shows that 30% were managers; 25% middle managers; 19% senior managers; 3% directors; and that board members were 1%. The data further shows that 8% of respondents were in sales and 14% were in an administrative position.

4.3.4 Sector in which Respondents Worked

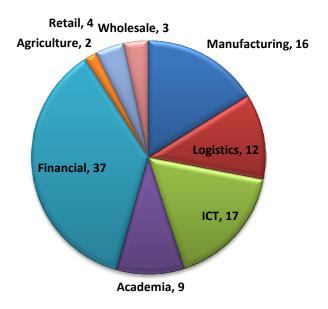


Figure 4.4 Distribution of responses by sector

The sectors were grouped into eight categories representing a cross section of organisations. The financial sector had the highest number of respondents representing a total of 37%. This was followed by the ICT sector with 17%; the manufacturing sector with 16%; and the logistics sector with 12%. The lowest numbers of respondents were from the agricultural sector with 2%; the retail sector with 4%; and the wholesale sector with 3%. The academic sector contributed 9% to the total number of respondents.

4.4 Descriptive Statistics of the Dependent Variables - Frequencies

Descriptive statistics of the dependent variable is the variable of primary interest to the researcher (Sekaran 2003). Through the analysis of the dependent variable, it is possible to find answers to objectives. The researcher will be interested in quantifying and measuring the dependent variable, as well as the other variables that influence the dependent variable (Sekaran 2003).

4.4.1 Objective One: To determine the effect of organisational structures and mechanisms on decision making

Questions 1 and 4 were developed to answer the first objective.

4.4.1.1 Decision making structures (Question 1)

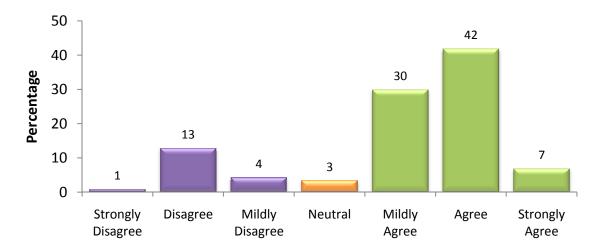


Figure 4.5 Decision making structures

Figure 4.5 indicates that most respondents were in agreement that their organisation had excellent decision making structures. A significant 42% of respondents agreed; supported by a large 30% who mildly agreed; and 7% that strongly agreed. An insignificant 1% strongly disagreed, however, a further 17% were in disagreement, of which 13% disagreed whilst 4% mildly disagreed with only 3% taking a neutral stance.

4.4.1.2 Organisation motivates decision making (Question 4)

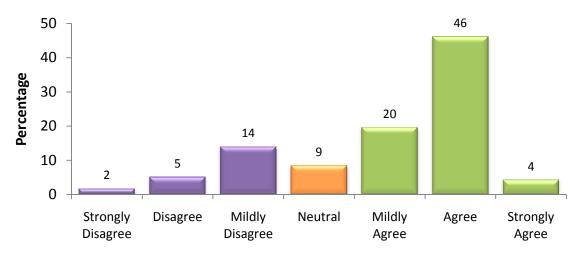


Figure 4.6 Motivation from the organisation

As can be seen from Figure 4.6, the majority (70%) of respondents were in agreement (4% strongly agreed; 46% agreed; and 20% mildly agreed) that their organisation motivated them to make their own decisions. However, an important 9% of respondents were neutral with a further 21% in disagreement (2% strongly disagreed; 5% disagreed; and 14% mildly disagreed). It should be noted that the neutral 9% were the fourth highest respondents.

4.4.2 Objective Two: To evaluate staff views and opinions on decision making and indecision

Questions 6, 7, 8, 9 and 29 were developed to answer the second objective.

4.4.2.1 Timeousness of decisions (Question 6)

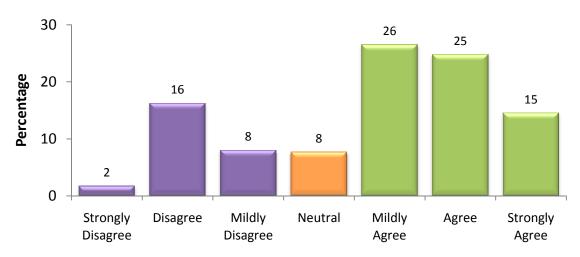


Figure 4.7 I take my time

Figure 4.7 reveals that most respondents take their time when it comes to making a decision. Fifteen percent (15%) strongly agreed; 25% agreed; and a further 26% mildly agreed, producing a total of 66% of respondents who were in agreement. Over a quarter (26%) of respondents were in disagreement of whom 8% mildly disagreed; 16% disagreed; and 2% strongly disagreed. It should be noted that a conspicuous 8% were neutral.

4.4.2.2 Colleagues timeousness of taking decisions (Question 7)

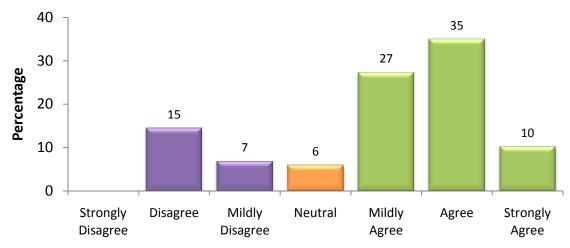


Figure 4.8 My colleagues take their time

Respondents were similar in their answers regarding their own time when comparing themselves to their colleagues. This is evident from Figure 4.8 where the majority of respondents were in agreement that their colleagues took their time when making a decision. Almost three quarters of respondents were in agreement of which 10% strongly agreed; 35% agreed; and 27% mildly agreed. Less than a quarter were in disagreement with 7% who mildly disagreed and 15% who disagreed. There were no respondents who strongly disagreed. A noticeable 6% were neutral.

4.4.2.3 Respondents make decisions instantly (Question 8)

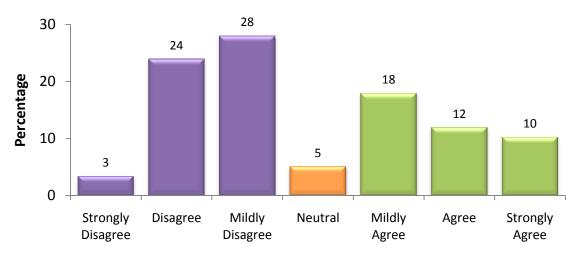


Figure 4.9 I make a decision instantly

The distribution in Figure 4.9 is biased towards the right indicating the respondents' personal views on making decisions instantly. Just over half of the respondents tend towards disagreement. It can be noted that 28% mildly disagreed; 24% disagreed; and 3% strongly disagreed contributing to a total of 55% of respondents who were in disagreement. In contrast, 40% of the respondents were in agreement (10% strongly agreed; 12% agreed; and 18% mildly agreed). A further 5% of respondents were neutral. It is evident that whilst 40% of the respondents took instant decisions, the majority (55%) tend not to do so.

4.4.2.4 Colleagues make instant decisions (Question 9)

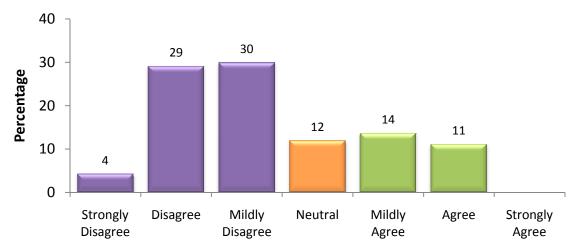


Figure 4.10 My colleagues make decisions instantly

It is evident from Figure 4.10 that respondents were similar in their answers when comparing themselves to their colleagues. The majority of respondents were in disagreement that their colleagues took decisions instantly. A total of 63% were in disagreement (30% mildly disagreed; 29% disagreed; and 4% strongly disagreed). In contrast, 11% agreed and 14% mildly agreed. A significant 12% of respondents were neutral.

4.4.2.5 Organisational tolerance of indecision (Question 29)

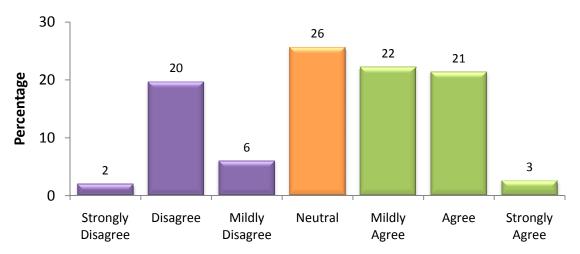


Figure 4.11 My organisation tolerates indecision

Respondents reported a high level of uncertainty with over a quarter (26%) choosing to remain neutral that their organisation tolerates indecision as illustrated by Figure 4.11. However, a significant 46% were in agreement (3% strongly agreed; 21% agreed; and 22% mildly agreed). The remaining 28% were in disagreement (2% strongly disagreed; 20% disagreed; and 6% mildly disagreed).

4.4.3 Objective Three: To evaluate the effect of training and support on decision making

Questions 2, 3, and 10 were developed to answer the third objective.

4.4.3.1 I am not afraid to voice an opinion (Question 2)

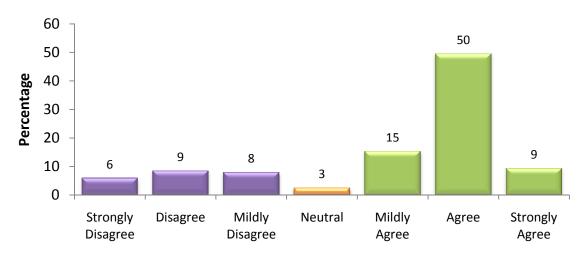


Figure 4.12 Fear of voicing opinion personally

Almost three quarters of respondents are not afraid to voice an opinion as shown in Figure 4.12. From the 74% that were in agreement, 9% strongly agreed; 50% agreed; and 15% mildly agreed. Just under a quarter were in disagreement with a further 3% who were neutral.

4.4.3.2 My colleagues are not afraid to voice an opinion (Question 3)

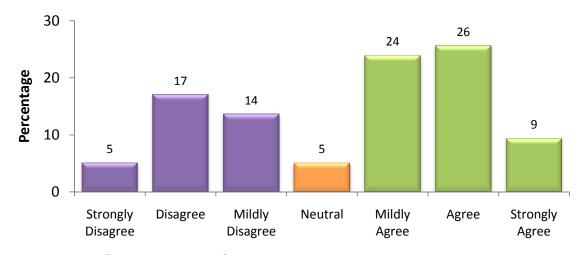


Figure 4.13 Colleagues unafraid to voice opinion

Figure 4.13 displays the respondents' views that their colleagues are unafraid to voice an opinion where 59% were in agreement with 9% who strongly agreed; 26% who agreed; and 24% who mildly disagreed. A further 36% of the respondents disagreed with a further 5% choosing to remain neutral.

4.4.3.3 My company trains staff on decision making (Question 10)

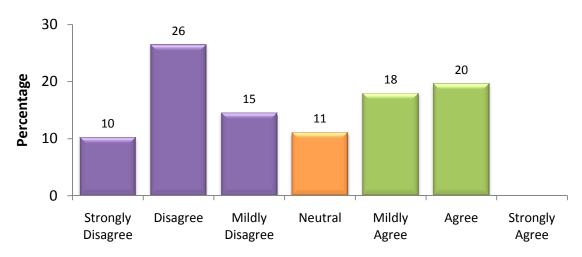


Figure 4.14 Staff training on decision making

It can be noted from Figure 4.14 that the respondents were mixed in their views that their company trained staff on decision making. However, the bulk (51%) of the respondents were in disagreement (15% mildly disagreed; 26 disagreed; and 10% strongly disagreed). Only 38% were in agreement of whom 20% agreed and a further 18% mildly agreed. It must be further noted that no one strongly disagreed with 11% choosing to remain neutral.

4.4.4 Objective Four: To establish the level of confidence of staff in decision making

Questions 19, 21, 22, 24, 25 and 28 were developed to answer the fourth objective.

4.4.4.1 I am confident about the outcomes of decisions that I make (Question 19)

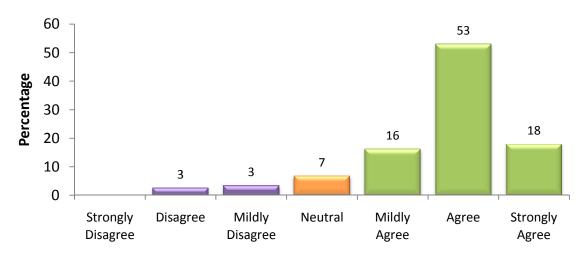


Figure 4.15 Confidence in outcomes

The bar graph in Figure 4.15 indicates that the vast majority of respondents were confident about the outcomes of the decisions that they make. In total, 87% were in agreement of whom 18% strongly agreed; 53% agreed; and 16% mildly agreed. No one strongly disagreed and only 6% were in disagreement.

4.4.4.2 I have confidence in my economic sector (Question 21)

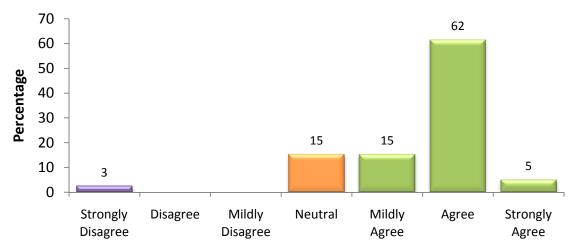


Figure 4.16 Confidence in economic sector

The dominant position taken by respondents was that they were in agreement that they have confidence in their economic sector. Figure 4.16 shows that 82% of respondents were in agreement (5% strongly agreed; 62% agreed; and 15% mildly agreed). Only 3% were in disagreement with a further 15% being neutral.

4.4.4.3 I enact the decisions I take (Question 22)

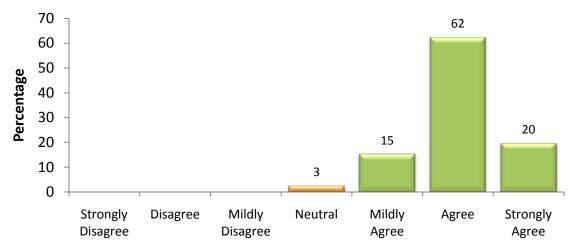


Figure 4.17 I enact the decisions I take

The respondents overwhelmingly agreed that they enacted the decisions that they took. Figure 4.17 illustrates that 97% were in agreement. A mere 3% were neutral.

4.4.4.4 I tolerate other people's inability to make a concrete decision (Question 24)

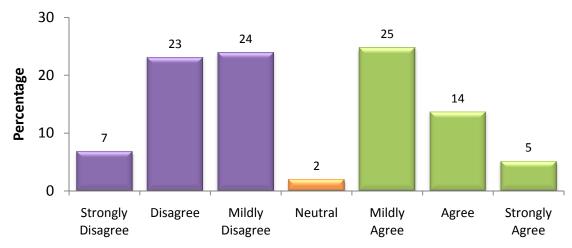


Figure 4.18 Tolerance of indecision

From Figure 4.18, it can be seen that the distribution is slightly skewed towards disagreement. It was noted that 54% of the respondents disagreed that they tolerated other people's inability to make a concrete decision whereas 44% were in agreement.

4.4.4.5 I am impatient with colleagues who do not make decisions (Question 25)

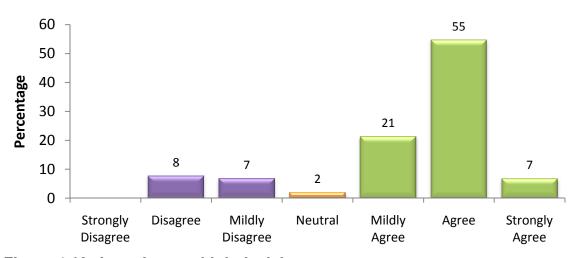


Figure 4.19 Impatience with indecision

The majority of respondents (83%) were in agreement that they were impatient with colleagues who did not make decisions. Figure 4.19 notes that 83% were in

agreement of whom 7% strongly agreed; 55% agreed; and 21% mildly agreed. Only 15% were in disagreement.

4.4.4.6 People who cannot make decisions should not be promoted (Question 28)

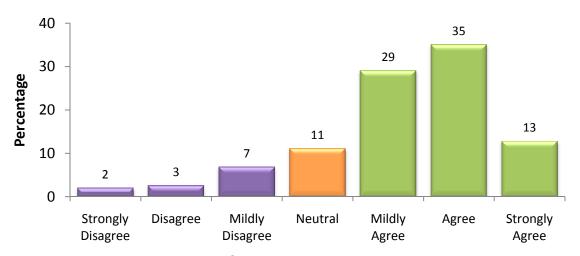


Figure 4.20 Non promotion of indecision

It is clear from Figure 4.20 that most respondents were in agreement that people who cannot make decisions should not be promoted. Over three quarters of respondents chose to agree (13% strongly agreed; 35% agreed; and 29% mildly agreed). Only 12% in total disagreed.

4.4.5 Objective Five: To determine whether staff perform research before making decisions

Questions 13 and 16 were developed to answer the fifth objective.

4.4.5.1 I learn from feedback from other colleagues (Question 13)

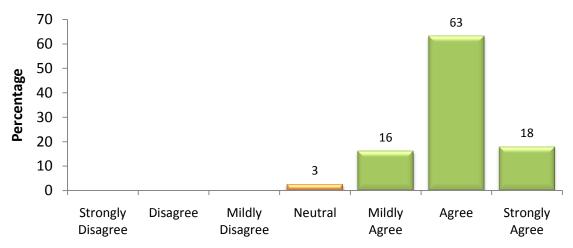


Figure 4.21 Learning from colleagues

From the distribution illustrated in Figure 4.21, it can be seen that almost all respondents indicated that they learn from feedback from colleagues. The majority (97%) were in agreement of which 18% strongly agreed; 63% agreed; and 16% mildly agreed. Only 3% of the respondents were neutral.

4.4.5.2 I research thoroughly before making an important decision (Question 16)

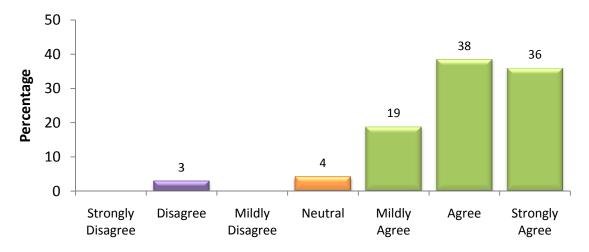


Figure 4.22 I research thoroughly

The distribution in Figure 4.22 is very similar to the distribution describing learning from colleagues in the previous figure. Almost all of the respondents indicated that they were in agreement that they researched thoroughly before making an

important decision. Further 36% strongly agreed, 38% agreed; and 19% mildly agreed which added to a grand total of 93%.

4.5 Cross-Tabulation

Cross-tabulation simultaneously compares two or more variables. Cross-tabulation categorises the number of responses to two or more questions, thus it is useful in showing the relationship of the two variables and for reporting the findings (Hair et al 2008).

Question 5 of the questionnaire asked the respondents whether they took the opinions of junior staff when making critical decisions and compared the data with the respondents' position at work. The resulting cross-tabulation is listed in Table 4.2. In order to make it easy to compare the data, the bar graph in Figure 4.23 displays the individual count of respondents' answers to Question 5 of which there were a total of 117 respondents (n=117).

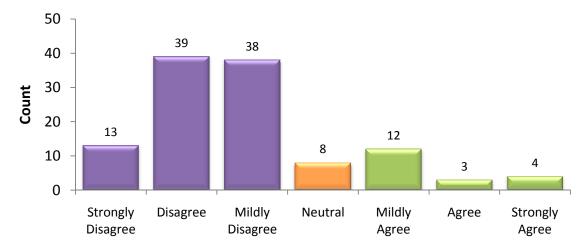


Figure 4.23 I don't take the opinion of junior staff

Figure 4.23 tends to bias to the right towards disagree. Further, 90 respondents out of a total of 117 respondents (n=117) were in disagreement that they didn't take the opinion of their junior staff when making a critical decision. Only 19 respondents out of a total of 117 respondents were in agreement. The cross-tabulation further analyses the respondents' answers displayed in Table 4.2.

n=117		Do respondents take opinions of junior staff when making critical decisions							
		Strongly agree	Agree	Mildly agree	Neutral	Mildly agree	Disagree	Strongly disagree	Total
	Admin.		1.7%	1.7%		6.0%	4.3%		13.7%
	Sales			0.9%		4.3%	1.7%	1.7%	8.6%
	Manager			2.6%	0.9%	14.5%	10.3%	1.7%	30.0%
at work	Middle	3.4%		3.4%	0.9%	4.3%	9.4%	3.4%	24.8%
at v	Manager								
Position	Senior Manager			1.7%	5.0%	3.4%	5.0%	3.4%	18.5%
Pos	Director		0.9%				2.6%		3.5%
	Board Member							0.9%	0.9%
	Total	3.4%	2.6%	10.3%	6.8%	32.5%	33.3%	11.1%	100%

Table 4.2 Position at work cross tabulated with whether respondents took the opinions of junior staff when making critical decisions

The columns of Table 4.2 represent the respondents' position at work. The rows represent the respondents' views on their level of agreement or disagreement.

A total of 19 respondents were in agreement that they didn't take the opinion of their junior staff when making critical decisions. There were only 4 respondents who strongly disagreed and all of them were Middle Managers. There were another 3 respondents that agreed of whom 2 were in Admin and 1 was a Director. There were a further 12 respondents that mildly agreed of whom 2 were in Admin; 1 was in Sales; 3 were Managers; 4 were Middle Managers; and 2 were Senior Managers.

A total of 90 respondents disagreed that they didn't take the opinion of their junior staff when making a critical decision. There were 38 respondents that mildly disagreed of whom 7 were in Admin; 5 were in Sales; 17 were Managers; 5 There were another 39 respondents that disagreed of which 5 were in Admin; 2 were in Sales; 12 were Managers; 11 were Middle Managers; 6 were Senior Managers; and 3 were Directors. There were a further 13 respondents that strongly disagreed of which 2 were in Sales; 2 were Managers; 4 were Middle Managers; 4 were Senior Managers; and 1 was a Board Member.

A total of 8 respondents chose to remain neutral. All 8 were in management of whom 1 was a Manager; 1 was a Middle Manager; and 6 were Senior Managers.

4.6 Inferential Statistics

Statistical inference is an application of inductive reasoning which moves from specific facts to general, but tentative conclusions. With the aid of probability estimates, the researcher can qualify the results and state the degree of confidence in the results. The researcher can never be sure that inductive conclusions are free of error (Cooper & Schindler 2001).

Causation is the inference that a change in one variable is responsible for (caused) an observed change in another variable (McDaniel & Gates 2010). **Correlation is not causation.** The essential element of causation is that *factor A* "produces" *factor B* or *factor A* "forces" *factor B* to occur. Empirically, the researcher can never demonstrate a *factor A–factor B* causality with certainty (Cooper & Schindler 2001). McDaniel & Gates (2010) further state that although statistical analysis can show that variables are associated or correlated with each other, it cannot prove causation. To establish bivariate correlations, Pearson's (product moment) correlation coefficient *(r)* was used. The correlation between the respondent's position at work and Question 5 is presented in Table 4.3.

Question	32. Position at Work		
5. I don't take the opinion of	Correlation Coefficient	0.081	
my junior staff when making critical decisions	Significance (2 tailed)	0.384	
	n	117	

Table 4.3 Correlation between position at work and taking opinions of junior staff

The results from Table 4.3 show the bivariate Pearson's r of the respondents position at work and whether the respondents take the opinions of their junior staff when making critical decisions. The correlation coefficient is 0.081. According to

Hair et al (2008) a correlation coefficient of 0.081 can be described as having a weak relationship or no relationship at all.

Question 6 and question 8 has the Pearson's correlation coefficient of -0.554 as listed in Table 4.4. The negative correlation means that the variables are inversely related, as one variable increases, the other variable decreases (Cooper & Schindler 2001).

Question		8. I make a decision instantly
6. I take my time when it	Correlation Coefficient	-0.554**
comes to making a decision	Significance (2 tailed)	0.000
decision	n	117

^{**} Correlation is significant at the 0.01 level (2-tailed)

Table 4.4 Correlation between taking one's time and making a decision instantly

It can be noted from Table 4.4 that the correlation is negative which is to be expected as Question 6 is asked in the negative of question 8. Respondents were first asked if they took their time when making decisions and then asked if they made decisions instantly. The resulting correlation coefficient of 0.554 is considered to be a moderated strong relationship according to Hair et al (2008).

In Table 4.5, question 8 asked the respondents if they took their time and question 12 asked the respondents if they ponder as to whether they made the right decision.

Question		8. I make a decision instantly
12. I do not ponder as to	Correlation Coefficient	0.296**
whether I have made the right decision	Significance (2 tailed)	0.001
Tigitt decision	n	117

^{**} Correlation is significant at the 0.01 level (2-tailed)

Table 4.5 Correlation between making a decision instantly and pondering over the right decision

The results from Table 4.5 show that the correlation coefficient is 0.296. According to Hair et al (2008), a coefficient of 0.296 is considered to be a weak relationship.

The level of confidence of the respondents were probed by question 19 and question 20 as listed in Table4.6

Question		20. I am a confident person
19. I am confident about the	Correlation Coefficient	0.448**
outcomes of decisions that I make	Significance (2 tailed)	0.000
that i make	n	117

^{**} Correlation is significant at the 0.01 level (2-tailed)

Table 4.6 Correlation between confidence in outcomes of decisions and confidence in oneself

The data in Table 4.6 reveals the correlation between the respondents' confidence in themselves and whether they are confident about the outcomes of the decisions that they take. The correlation coefficient is 0.448 which according to Hair et al (2008) is moderately strong.

4.7 Summary

Management questions frequently involve relationships between two or more variables. Analysis using descriptive statistics as well as inferential statistics may be applied to study such relationships. Descriptive statistics that included the analysis of the independent variables of age; gender; position at work; and sector of the respondents were used in this study. The dependent variables were analysed with a view of interrogating the objectives using Cronbach's alpha and other statistical techniques. These techniques included cross tabulation and the Pearson's (product moment) correlation coefficient. Although correlations between variables occurred, it must be noted that this does not imply that a change in one variable caused the other to change. A discussion of the data will be presented in Chapter Five.

CHAPTER FIVE

Discussion

5.1 Introduction

The literature review of this study was presented in Chapter Two and the empirical data to support this was presented in Chapter Four which formed the framework for this study that determines the effect of decision making and indecision on organisations. The aim of Chapter Five is to link the empirical results to the literature review.

5.2 Demographics

The demographic data showed that 43% of respondents were male and 57% of respondents were female. Recent statistics (Statistics South Africa, 2011) mentioned that the South African population consisted of 51.5% female and 48.5% male whereas the statistics for the province of KwaZulu-Natal population was similar to the national average consisting of 52.3% female and 47.7% male. The demographic data also revealed that almost three quarters (73%) of the respondents fell in three age groups of 26-30; 31-35; and 36-40.

The demographic data further revealed that more than three quarters (78%) of the respondents were in managerial positions. The sampling technique used for this study is purposive judgment non-probability sampling. Judgment sampling occurs when a researcher selects sample members to conform to some criterion (Cooper & Schindler 2001) and involves the choice of subjects who are the most advantageously placed or in the best position to provide the information required (Sekaran 2003). Therefore, the data is biased towards management as the questionnaire was distributed amongst the researcher's sphere of influence and via other MBA students of whom a large proportion were in managerial positions.

5.3 Findings of the Study

The previous chapters discussed how decisions were made, the different methods used, the decision making styles and indecision. The findings were presented in Chapter Four. There is a pattern that has emerged from this study that most organisations have good decision making structures but staff had difficulty making decisions instantly and that indecision existed in organisations. It also became apparent that staff had confidence in their decision making and that they conducted research before making decisions. The findings are presented under the following objectives.

5.3.1 Objective One: To determine the effect of organisational structures and mechanisms on decision making

The first objective questioned whether or not the organisation had excellent decision making structures in the organisation. The results showed that the majority (79%) of the respondents agreed that organisational structures had an effect on decision making. This is in line with Paine (1994) who commented that one of the hallmarks of effective organisational structures is that the organisations systems and structures support and reinforce its values and that managers in organisations have the decision making skills and competencies needed to make ethically sound decisions on a day-to-day basis. In addition, Blenko, Mankins & Rogers (2010) stated that when the organisation structures are in sync with its decision structures, then the organisation will work better and improved performance will be achieved.

Based on the data in Figure 4.6, it is evident that the majority (70%) of the respondents were in agreement that their organisation motivated them to make their own decisions. This is supported by a recent study completed by Nohria, Groysberg & Lee (2008) who surveyed 300 of the Fortune 500 companies and established that over 60% of employees were motivated by the organisation which resulted in an improvement in performance. Therefore it can be taken as a given that a motivated workforce can boost company performance.

5.3.2 Objective Two: To evaluate employee views and opinions on decision making and indecision

The questions and the resultant data relating to evaluating staff views and opinions on decision making were developed to answer the second objective. Just over half (51%) of the respondents disagreed that they made decisions instantly as can be seen in Figure 4.12. Making faster decisions has various consequences for an organisation. This is supported by Blenko, Mankins & Rogers (2010) who noted that an organisation's structure produced superior performance only when the organisation's ability to make and execute key decisions was better and faster.

A significant 46% were in agreement that their organisation tolerated indecision whilst the remaining 28% were in disagreement. Indecision in organisations creates uncertainty with a consequential effect on performance. The results underline comments by Charan (2006) who said that staff charged with reaching a decision and acting on it fail to connect and engage with one another. One of the reasons for this is that staff are intimidated by group dynamics, hierarchy and are constrained by formality and lack of trust, thus making decisions without conviction. The significance of the results can be rationalised by Charan (2006) who commented that due to the lack of emotional commitment staff were unable to act decisively but that a decisive organisation is rewarded with a productive workforce.

It was also revealed that most respondents (66%) took their time when it came to making a decision and over a quarter (26%) of the respondents were in disagreement. Respondents were similar in their answers regarding their own time when comparing themselves to their colleagues. In order to break the culture of indecision, a leader who can engender intellectual honesty and trust in the connections between people is required. Honest and decisive dialogue sets the tone for the entire organisation and thus transforms the culture of indecision (Charan 2006). Follow-through and feedback are the final steps in creating a decisive culture where high achievers are rewarded. These high achievers are able to coach those who are struggling and redirect the behaviours of those people who are indecisive.

5.3.3 Objective Three: To evaluate the effect of training and support on decision making

It can be seen in Figure 4.14 that the majority of the respondents (51%) disagreed in their views that their company trained staff on decision making. From the data it is evident that companies need to provide ongoing training in order to improve decision making. Goldsmith (2010) suggested that developing people is a strategic process that would add value to both staff and the organisation by creating highly committed staff and thus reaping great financial rewards for the organisation.

The findings of the study also revealed that almost three quarters of the respondents were not afraid to voice an opinion. The majority of the respondents (74%) were in agreement and just under a quarter were in disagreement. Most of the respondents (59%) revealed that their colleagues were unafraid to voice an opinion. Goldsmith (2010) said that high on the list for organisations who want to retain high performers is training and on-going training, which ensures good decision making and that the job is done properly. He suggests that by working one on one with staff in a coaching relationship is a sure way to tap into the talents of individuals and direct their development, thus enhancing the success of the organisation.

5.3.4 Objective Four: To establish the level of confidence of employees in decision making

This objective focused on whether the respondents were confident in the outcomes of the decisions that they had made. Figure 4.18 indicated that a total of 87% were in agreement. Being confident leads to effective decision making and provides others with the guidance that is needed to assist them in making good decisions. Sutton (2010) mentioned in his blog that he strives to be confident enough to convince people that he is in charge, but humble enough to realise that he may be wrong. He further states that balancing confidence and doubt is a hallmark of great bosses.

The majority of the respondents were in agreement that they had confidence in their economic sector and that they also enacted the decisions that they took. The results regarding tolerance of indecision showed that 54% of the respondents were in disagreement that they tolerated other people's inability to make a concrete decision whereas 44% were in agreement.

From the analysis of the empirical data, it can be concluded that most of the respondents were in agreement that they are impatient with colleagues who do not make decisions. They were in agreement that people who cannot make decisions should not be promoted.

5.3.5 Objective Five: To determine whether employees perform research before making decisions

In terms of the findings, it was established that almost all the respondents (97%) indicated that they learnt from feedback from colleagues. Harvey (2007) in her paper on effective decision making stated that organisations are constantly making decisions and have used the outcome of past decisions to ensure that staff learnt from this.

Drucker (1999) stated that one needed to identify one's strengths and in order to do this one needed to use feedback analysis. He further stated that feedback analysis was essential to remedy bad habits. From the data presented in the previous chapter it can be noted that staff made informed decisions after consulting with their colleagues. This improved the ability of staff to make decisions and improved the performance of the organisation.

Almost all of the respondents indicated that they were in agreement that they researched thoroughly before making an important decision. Etzioni (1989) supports this when he stated that good managers know how to make decisions based on researched information. He further stated that rationalist decision makers simply need to know much more than ever before and by using

computers, the human capacity to collect and to semi-process information and knowledge have grown.

Harvey (2007) stated that in order for decision making to be effective useful information must be sought and staff must work closely together to combine their expertise. Based on the findings it is evident that most staff learnt from feedback and researched well before making a decision in an organisation.

5.4 Summary

Upon looking at the results the study was able to ascertain that many organisations had excellent decision making structures. It was identified that most respondents agreed that organisational structures had an effect on decision making. The majority of the respondents were in agreement that their organisation motivated them to make their own decisions resulting in a boost to staff morale which ensured a motivated workforce which promoted positive results for the organisation. Indecision in organisations had a major effect on staff in the workplace. Over half of the respondents disagreed that they made decisions instantly and this impacted on the organisation but producing superior performance only when the organisation's ability to make and execute key decisions was better and faster. It was also revealed that most respondents took their time when it came to making a decision and were not afraid to voice their opinions. It is evident that organisations need to provide ongoing training in order to improve decision making and add value to both staff and the organisation by creating highly committed staff and thus reaping great financial rewards for the organisation. These high achievers are able to coach those who are struggling and redirect the behaviours of those people who are indecisive.

In this chapter it was established that most respondents had the confidence about the outcomes of the decisions that they had made which created a balance in the organisation. They were of the opinion that people who cannot make decisions should not be promoted. It was also established that feedback was very important in the workplace. Staff used research and feedback analysis in order to identify methods in good decision making. They assimilated information and knowledge

from their colleagues and used the same to identify how decisions were made in the past. Subsequently staff used this expertise to make better decisions for the future and furthermore, staff learnt from feedback and researched well before making a decision in an organisation. The next chapter will discuss the conclusion and summary of the research, and will also propose recommendations to address the research problem.

CHAPTER SIX

Recommendations and Conclusion

6.1 Introduction

This chapter proposes recommendations based on this study and makes recommendations for future studies on decision making. This chapter will also examine some of the key findings as well as some of the limitations of this study. Finally, this chapter will conclude this study on decision making, indecisiveness and its impact on business in Durban.

The aim of this study was to determine the effect of decision making and indecision on organisations and also to critically evaluate the attitudes and perceptions of decision makers on organisational effectiveness. Chapter Two contained the literature review with the purpose of providing a framework for this study which was further supported by empirical research contained in Chapter Four and the results discussed in Chapter Five. The aim of Chapter Six is to examine the key findings; discuss the limitations; propose recommendations; and finally, to conclude this study.

6.2 Key Findings

The pattern that emerged from this study was that most organisations had good decision making structures that motivated them. However, it also emerged that staff had difficulty making decisions instantly and that indecision existed in organisations. It also became apparent that staff had confidence in their decision making and that they conducted research before making decisions. Furthermore, some staff just could not make up their minds which caused the organisations performance to suffer as a result. Research showed that leaders can eradicate indecision by transforming the tone and content of everyday conversations at their organisation.

Another pattern that emerged is that organisations need to have ongoing training to support staff and to assist in decision making. The actions and experiences of executives and the associated implicit learning processes are important tools in building intuition. Training supported by building confidence produced an outcome where the decision making was good with the resultant increase in staff performance. The study showed that staff liked to be consulted when critical decisions had to be made and that managers needed to address indecision.

6.3 Limitations of the Study

The previous section discussed the key findings of this study. The limitations that presented itself during the course of this study are discussed below.

6.3.1 Limited Timeframe

There was a limited timeframe for the distribution and for data collection from the questionnaire. The data was only collected in a nine month period which ran concurrently with the progression of the literature review and research methodology. There was also a limited timeframe for the analysis of the data and the subsequent discussion. The additional impact of the limited timeframe is discussed as part of other limitations below.

6.3.2 Sample Size Limitations

The sample size in this study was 117. This was a relatively small sample of the total population with the distribution and resulting number of respondents being dictated by the limited timeframe of this study. Although purposive judgment non-probability sampling was used in the collection of data, and was distributed to the researcher's sphere of influence resulting in a bias towards management, it will be prudent for future studies to have a greater number of respondents in total and from all levels in an organisation.

Additionally, this study was only conducted in the Durban metropolis. The inclusion of other metropolitan regions (Johannesburg, Cape Town, etc.) will significantly increase the population size with the resultant increase in the number of respondents.

6.3.3 Abundance of Literature

The abundance of literature on this topic has had the perverse effect of making available too much of examinable information. Decision making as a base topic has become a field of study in its own right with a multitude of books, academic journals and industry specific periodicals devoted solely to the topic. This study has had to limit the literature research to academic journals, periodicals from recognised business schools and books written by experts in management due to the sheer volume of available literature. The additional limitation of time as previously discussed only served to exacerbate this limitation.

6.3.4 Questionnaire Limitations

The questionnaire was distributed mainly via the Internet with the entire research process being conducted electronically with the bulk of respondents being in managerial positions. The questionnaire was also limited to distribution amongst the researcher's sphere of influence. The research did not involve any face-to-face interviews or any other type of human interaction in the completion of the questionnaire. Therefore due to the use of self-reported instruments, the study may possibly not truly illustrate the tendencies of decision making in organisations. As discussed earlier, the limited timeframe of the research did not permit an indepth probing of the respondents. It would be interesting to conduct additional field studies at all levels in the organisation to analyse the relationship between variables such as the hierarchal structure and conflict on decision making.

6.3.5 Correlation and Causation Limitations

Correlation is not causation. Causation is the inference that a change in one variable is responsible (caused) an observed change in another variable (McDaniel & Gates 2010). This study data is limited to descriptive statistics and inferential statistics including correlations but cannot prove causation. Future studies could look at the three things that demonstrate causation: concomitant variation (correlation); the appropriate time order of occurrence; and the elimination of all other possible causal factors (Cooper & Schindler 2001). Future studies should look at the causal factors in decision making.

6.3.6 Comparison of companies

This study did not focus on one company in particular, therefore the findings cannot be generalised to a company. Furthermore, the study did not take into account a comparison of companies nor did it look at the sector of the company. It was limited to feedback from individuals in various types of companies.

6.4 Recommendations for this Study

The following are recommendations based on the results for decision making, indecisiveness and its impact on business in Durban.

- Organisations can address indecisiveness through on-going involvement. To
 take this process forward they need to prepare staff by holding training and
 information sessions. It is very important to make sure that the environment
 for employees is as pleasant as possible. Brainstorming is a technique that
 could be used and is usually very effective in generating solutions to a
 problem.
- Respondents said that feedback from other staff in the organisation was very important. Therefore feedback sessions should be implemented on a regular basis. Martin (2007) stated that we are drawn to the stories of effective

leaders in action and that their bold decisions make for gripping narratives. Managers who don't look at past experiences or failures are unable to learn from them. Managers need to compare what happened in the past, explore why expectations were not met and derive a guideline that will assist in future decisions made in the organisation.

- The respondents also agreed that their organisations motivated them. It is therefore essential for managers to build relationships and provide a motivational environment for making good decisions. It is also possible to implement a reward system as motivation for employees. Davenport (2009) noted that the most important challenge when managing employees involved motivation. Employees were more likely to be motivated by learning opportunities, greater responsibility and challenging projects.
- Organisations are made up of people with diverse interests and values and
 this must be taken into account when staff disagree and are indecisive. The
 diverse interests and values are some of the reasons that organisations
 struggle to translate strategy into action. This challenge needs to be
 addressed further. Subsequently, people should be judged by their individual
 achievements, rather than by their diverse backgrounds.
- Managers do not always have access to all the information they need to make a decision. George & Jones (2006) pointed out that human decision making capabilities are bounded by people's cognitive limitations that is their ability to interpret, process and act on large amounts of information. George & Jones (2006) stated that sometimes the alternatives are so great, the information so vast, that it is extremely difficult for a manager to evaluate and make a decision. Organisations therefore need to provide tools that ensure complete information is available to employees in order for quick and efficient decision making.
- Companies should consider ongoing training in order for quick and effective decision making. Goffee & Gareth (1996) stated that in organisations, it has

proven that management's focus should be on recruiting and retaining the right people. Once individuals have been hired, ongoing training should be the central focus in retaining individuals, who will then require little supervision.

Finally, it is recommended that businesses strive to use the above, and learn from past mistakes in order to improve future decision making and overcome indecisiveness in organisations.

6.5 Recommendations for Future Studies

The recommendations for future studies arise self evidently from the limitations of this study. Further recommendations are proposed based on the literature review, results and discussion of this study.

- This study had a limited timeframe for completion which impacted on the size
 of the sample and other factors. Future studies should ensure they have a
 larger sample size as well as a greater cross section of employees within the
 organisation.
- The questionnaire was limited to distribution amongst a small sphere of influence with the bulk of respondents being in managerial positions. Future studies should look at all levels within the organisation. The first level of segmentation could occur at board level. Further segmentation could be in management by dividing it into senior management, middle management, and junior management. Technical specialists and support staff could be segmented as well.
- This study used instruments that were self-reported and may possibly not truly illustrate the tendencies of decision making in organisations. The research did not involve any face-to-face interviews or any other type of human interaction in the completion of the questionnaire. It would be interesting to conduct additional in-depth interviews to analyse the

relationship between variables such as the hierarchal structure and conflict in decision making at the various levels in an organisation.

- This study had to limit the literature research to academic journals, periodicals from recognised business schools and books written by experts in management due to the sheer volume of available literature. This material is suitable for a PhD thesis where future studies could make use of all the available resources with a wider search of appropriate material.
- This study was conducted in a predominately western business environment. The idiom that "the squeaky wheel gets the grease" which is pervasive in the west versus "the loudest duck gets shot" which is pervasive in the east, highlights the differences between the east and west. It would be significant for future studies to conduct research on the divergence of decision making in the two extremes.
- There are a number of focus areas that this study was unable to look at, however, future studies could consider the following topics:
 - The framing of questions in decision making
 - Gender differences and decision making
 - The use of heuristics and decision making
 - Ethics and decision making
 - The impact of the financial crisis on decision making
 - Strategic decision making taking the triple bottom line into account
 - · The use of intuition in decision making
 - Decision making and the role of conflict
 - Decision making in volatile environments
 - Decision making at board level

Edersheim (2007) citing Drucker said that decisions need to be viewed as a step on a path – moving two steps forward and one step back, learning, adapting as appropriate – moving forward. Drucker also said that the moment to tackle how to improve decision making in organisations and the time to search for strategies to improve perception before taking a decision has arrived.

6.6 Conclusion

All employees are responsible for contributing towards decision making in an organisation and their contribution ultimately affects whether or not the organisation will be successful. The aim of this study was to determine the effect of decision making and indecision in organisations; to critically evaluate the attitudes and perceptions of decision makers on organisational effectiveness. Notwithstanding the limitations of this study it became apparent from the data that organisations had excellent decision making structures and that this motivated employees to make their own decisions.

Decision making is the root of everything that we do; it is a critical aspect that keeps staff happy and successful. However, the implications on the bottom line and on organisational sustainability are tempered by the effects of indecision. It emerged in this study that leaders can eradicate indecision by transforming the tone and content of everyday conversations at their organisations. Ultimately, changing a culture of indecision is a matter of leadership. It is a matter of asking the hard questions and answering with robust and effective social operating mechanisms; strong linkages; and having the right people in the right places. Transforming a culture of indecision is an enormous and demanding task. It takes listening skills, business acumen, and operational experience to firmly eradicate.

The aim and objectives provided a framework and starting point for this study which was supported by a literature review, research, analysis and recommendations to conclude this study. The literature review provided valuable information which guided the research and analysis. The limitations and recommendations were the resultant effect of all these processes.

This study is therefore designed to help managers and other employees understand the theories and practices of effective decision making so that they can make better decisions in their personal and professional lives. It will help organisations and their employees to understand what they need to do in order to survive in a fast moving and competitive environment.

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APPENDIX 1



MBA Research Project

Researcher: Vimilan Naiker (083 303 1588)
Supervisor: Professor Anesh Maniraj Singh (031 260 7564)
Research Office: Ms P Ximba (031 260 3587)

I, Vimilan Naiker, am a MBA student in the Graduate School of Business, Faculty of Management Studies, at the University of KwaZulu-Natal. You are invited to participate in a research project entitled "Staff Decision Making and Indecisiveness: The Impact of Businesses in Durban". The aim of this study is to establish the effect of indecisiveness on organisations.

Through your participation I hope to understand the effect of peoples' decision makings habits on organizations.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business, UKZN. If you have any questions or concerns about participating in this study, please contact me or my supervisor at the numbers listed above.

It should take you about 5 minutes to complete the questionnaire. The questionnaire contains one page with 33 questions. I hope you will take the time to complete the questionnaire.

Sincerely

Vimilan Naiker 29 October 2009

Questionnaire

Decision Making and Indecisiveness: The Impact on Business in Durban

Please indicate your opinion by ticking the number that applies.

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31. Gen Male Fema		:					

32 .	Position at Work:
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	Manager
	Middle Manager
	Senior Manager
	Director
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End of Questionnaire

Thank you for taking the time to complete the questionnaire.

APPENDIX 2

Ethical Clearance



Research Office, Govan Mbeki Centre Westville Campus Private Bag x54001 DURBAN, 4000 Tel No: +27 31 260 3587 Fax No: +27 31 260 4609 Ximbap@ukzn.ac.za

23 November 2011

Mr V Naiker (871873403) **Graduate School of Business**

Dear Mr Nalker

PROTOCOL REFERENCE NUMBER: HSS/0762/09M NEW PROJECT TITLE: Decision Making and Indecisiveness: The Impact of Business in Durban

APPROVAL AND CHANGE OF DISSERTATION TITLE

I wish to confirm that ethical clearance has been granted full approval for the above mentioned project:

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

Best wishes for the successful completion of your research protocol.

Yours faithfully

Professor Steven Collings (Chair)

Humanities & Social Sciences Research Ethics Committee

cc Supervisor Professor Anesh Singh cc Mrs C Haddon

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